

## Intro to Investing



**George T Cook, CIMA®**  
Institutional Consulting Director  
[George.T.Cook@msgraystone.com](mailto:George.T.Cook@msgraystone.com)

**Robert J. Morris**  
Institutional Consulting Director  
[Robert.J.Morris@msgraystone.com](mailto:Robert.J.Morris@msgraystone.com)

**Suzanne Lindquist**  
Executive Director  
[Suzanne.Lindquist@morganstanley.com](mailto:Suzanne.Lindquist@morganstanley.com)

**Chicago, IL Office**  
760 W Main Street  
Suite 200  
Barrington, IL 60010  
Tel: (847) 382-6608

**Wichita, KS Office**  
1617 N Waterfront Parkway  
Suite 200  
Wichita, KS 67206  
Tel: (316) 630-4488

**New York Office**  
522 Fifth Avenue  
14th Floor  
New York, NY 10036  
Tel: (212) 296-1064



# Investing Can Be Complicated and Overwhelming: We're Here to Help

When formulating an investment strategy, it's important to have a strong understanding of three key fundamentals:

- **Major Asset Classes**

- The four major asset classes we focus on are Cash & Cash Alternatives, Fixed Income, Equities and Alternative Investments.
- We also provide a description of major investment vehicles such as Mutual Funds and ETFs.

- **Basic Tenets of Investing**

- These include the benefits of compounding interest, the importance of staying invested, and how market timing can impact your portfolio.

- **Asset Allocation and Diversification**

- The importance of asset allocation and diversification within a portfolio to help mitigate risk.

We recommend investors formulate a plan for their investments based on their goals. This requires an understanding of both time horizon and risk tolerance.

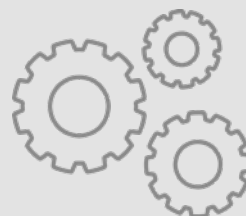
Source: Morgan Stanley Wealth Management Global Investment Office

Past performance is no guarantee of future results. Estimates of future performance are based on assumptions that may not be realized. This material is not a solicitation of any offer to buy or sell any security or other financial instrument or to participate in any trading strategy. Please refer to important information, disclosures and qualifications at the end of this material.

## Major Asset Classes



## Basic Tenets of Investing



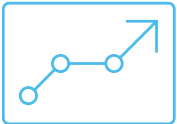



## Asset Allocation & Diversification



# One of the Most Important Parts of Investing Is Selecting Appropriate Asset Classes for Your Goals

## Major Asset Classes

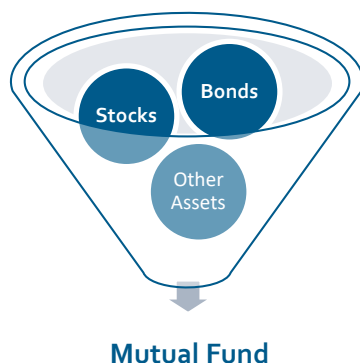
Asset Class	Description	Uses
 <p>Cash &amp; Cash Alternatives</p>	<ul style="list-style-type: none"> <li>• Matures &lt;1 year</li> <li>• Highly liquid securities</li> </ul>	<ul style="list-style-type: none"> <li>• Capital Preservation</li> </ul>
 <p>Fixed Income</p>	<ul style="list-style-type: none"> <li>• Potential periodic income at regular intervals</li> <li>• Varied maturity</li> </ul>	<ul style="list-style-type: none"> <li>• Capital Preservation</li> <li>• Stable Income Stream</li> </ul>
 <p>Equity</p>	<ul style="list-style-type: none"> <li>• Company ownership</li> </ul>	<ul style="list-style-type: none"> <li>• Capital Appreciation</li> <li>• Income</li> </ul>
 <p>Alternatives</p>	<ul style="list-style-type: none"> <li>• Lower correlation to the market/other asset classes</li> </ul>	<ul style="list-style-type: none"> <li>• Capital Appreciation</li> <li>• Diversification</li> </ul>

Source: Morgan Stanley Wealth Management Global Investment Office

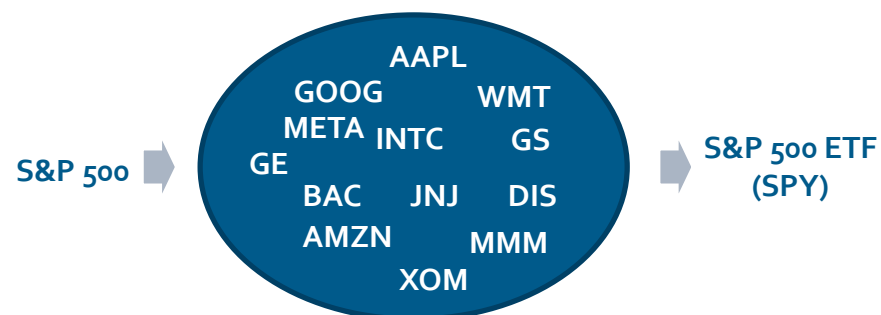
Past performance is no guarantee of future results. Estimates of future performance are based on assumptions that may not be realized. This material is not a solicitation of any offer to buy or sell any security or other financial instrument or to participate in any trading strategy. Please refer to important information, disclosures and qualifications at the end of this material.

# Mutual Funds (MFs) and Exchange Traded Funds (ETFs) Basics

- A **Mutual Fund** is an investment vehicle funded by shareholders for the purpose of investing in stocks, bonds, money market instruments and other assets.
- Mutual Funds are typically actively managed by professional money managers who make security selection decisions that can lead to higher fees than ETFs.
- Mutual Funds enable investment across asset classes that might otherwise be out of reach due to minimum account sizes or high cost.



- An **ETF** is an investment vehicle designed to mimic the daily movement of a market index or other benchmark.
- ETFs are typically passively managed and do not involve security selection. This tracking of the market may not offer the same level of potential dividend returns as owning the stock.
- ETFs enable you to gain market exposure at a lower cost, and with more transparency than comparable investment products.



Source: Morgan Stanley Wealth Management Global Investment Office. Equity securities shown as constituents of the S&P 500 as well as the S&P 500 ETF are for illustrative purposes only.

Past performance is no guarantee of future results. Estimates of future performance are based on assumptions that may not be realized. This material is not a solicitation of any offer to buy or sell any security or other financial instrument or to participate in any trading strategy. Please refer to important information, disclosures and qualifications at the end of this material.

# Asset Class Map

Cash											
Cash Alternatives						US Cash Deposits			Non-USD Deposits		
CDs		Money Market		US T-Bill							
Fixed Income											
Investment Grade								Non Investment Grade			Convertible Bonds
Treasuries	Agencies	Corporates	Inflation Protected	Non-US	Mortgages	Municipals	Floating Rates	US High Yield	Emerging Markets Debt	Municipal High Yield	
Equities											
US			Developed Market			Emerging Markets			Preferred Stocks		
Large Cap	Mid Cap	Small Cap	Large Cap	Mid Cap	Small Cap	BRIC	Beyond BRIC	Frontier			
Alternatives											
Real Assets		Absolute Return Assets		Equity Hedge Assets		Equity Return Assets		Private Investments			

Source: Bloomberg, Morgan Stanley Wealth Management Global Investment Office. Beyond BRIC- emerging market countries besides Brazil, Russia, India, and China. Frontier - frontier countries are typically less developed than EM nations. MSCI currently defines 32 nations as frontier markets. These markets tend to be the riskiest markets in the world.

Past performance is no guarantee of future results. Estimates of future performance are based on assumptions that may not be realized. This material is not a solicitation of any offer to buy or sell any security or other financial instrument or to participate in any trading strategy. Please refer to important information, disclosures and qualifications at the end of this material.

# Cash Alternatives for Liquidity and Capital Preservation

Cash				
Cash Alternatives			US Cash Deposits	Non-USD Deposits
CDs	Money Market	US T-Bill		

## Certificate of Deposit (CD)

- A CD is a document issued by the bank to an investor who agrees to deposit their money for a set period of time for an interest rate typically higher than their savings account.

## Money Market Funds

- Money market funds are mutual funds that invest in short-term debt securities and act like savings accounts but provide higher yield.

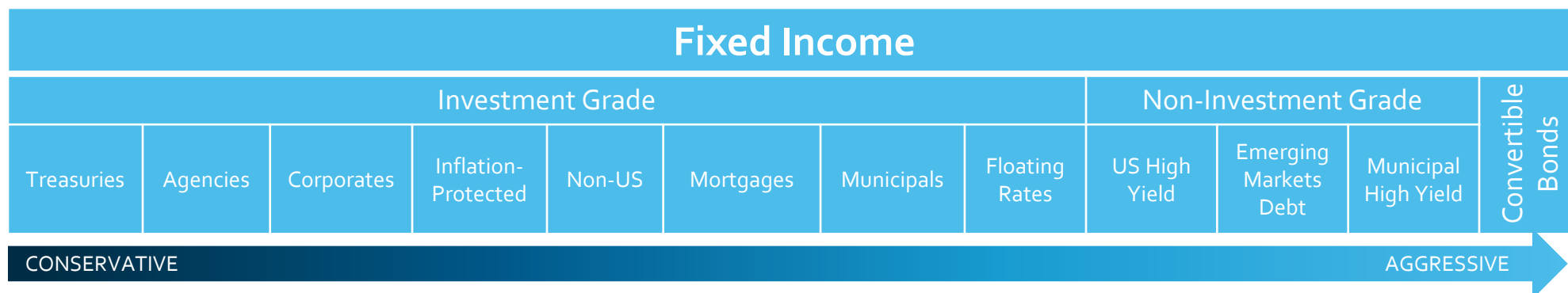
## US Treasury Bills

- Treasury Bills are securities issued by the United States Department of Treasury. When issued to companies, such companies are essentially lending the government money.

Source: Morgan Stanley Wealth Management Global Investment Office

Past performance is no guarantee of future results. Estimates of future performance are based on assumptions that may not be realized. This material is not a solicitation of any offer to buy or sell any security or other financial instrument or to participate in any trading strategy. Please refer to important information, disclosures and qualifications at the end of this material.

# Fixed Income for Stable Income Stream

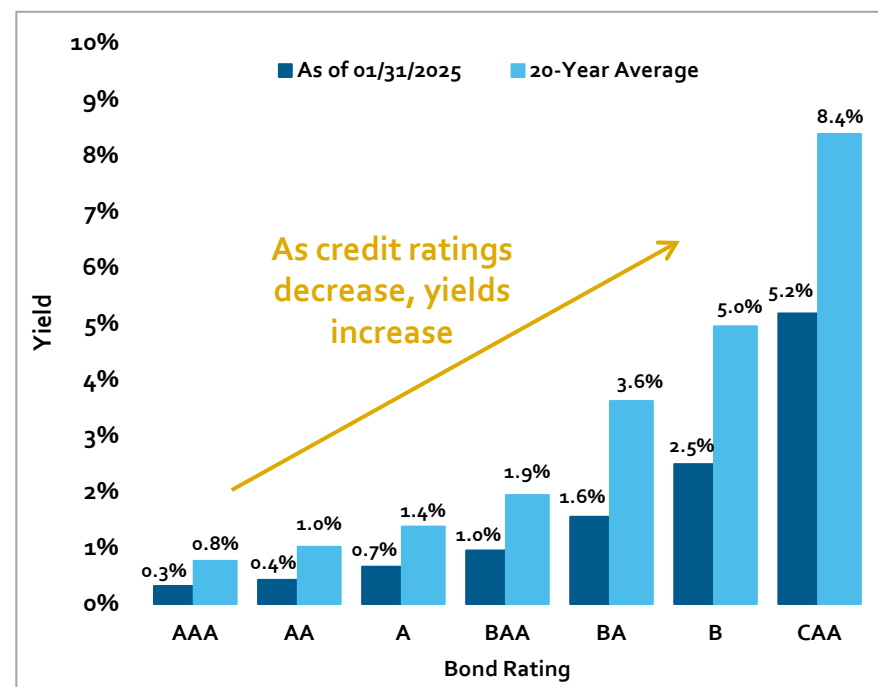


## Fixed Income Coupon

- Coupons or interest payments are the yield collected by the investor at a fixed interval, typically semi-annually.
- The amount of the coupon is determined by the coupon rate or interest rate.
- Coupons make up a large portion of the total return of fixed income securities.

## Corporate Spreads<sup>1</sup> vs. Average

As of January 31, 2025



Source: Morgan Stanley Wealth Management Global Investment Office. (1) Option-Adjusted Spread is the measurement of the spread of a fixed-income security rate and the risk-free rate of return, which is adjusted to take into account an embedded option. The risk-free rate represents the interest an investor would expect from an absolutely risk-free investment over a specified period of time.

These are not investable securities and the yields displayed do not account for any applicable advisory fees or expenses. However, in an advisory relationship there will be applicable advisory fees and expenses, the deduction of which, when compounded over a period of years, would decrease returns.

Past performance is no guarantee of future results. Estimates of future performance are based on assumptions that may not be realized. This material is not a solicitation of any offer to buy or sell any security or other financial instrument or to participate in any trading strategy. Please refer to important information, disclosures and qualifications at the end of this material.



# Equity for Capital Appreciation

Equities									
US			Developed Market			Emerging Markets			Preferred Stocks
Large Cap	Mid Cap	Small Cap	Large Cap	Mid Cap	Small Cap	BRIC	Beyond BRIC	Frontier	

## Dividend

- An equity security that pays regular dividends, often because the firm is past the point of needing to reinvest profits.
- Most have lower levels of volatility than overall stock market and offer higher-than-average market dividend yields.

## Value

- A value stock is a security that has fallen out of favor in the marketplace and is typically valued lower than stocks of similar companies.
- Investing in a value stock attempts to capitalize on inefficiencies in the market price.

## Growth

- A growth stock is a security whose earnings are expected to grow at a higher-than-market rate.
- Growth stocks typically do not pay dividends and are chosen for their potential price appreciation.

Source: Morgan Stanley Wealth Management Global Investment Office

Past performance is no guarantee of future results. Estimates of future performance are based on assumptions that may not be realized. This material is not a solicitation of any offer to buy or sell any security or other financial instrument or to participate in any trading strategy. Please refer to important information, disclosures and qualifications at the end of this material.

# Alternatives for Diversification From Traditional Markets

Alternatives				
Real Assets	Absolute Return Assets	Equity Hedge Assets	Equity Return Assets	Private Investments

## Real Assets

- Real Assets are tangible assets that derive their value from their own intrinsic and inherent qualities.

## Absolute Return Assets

- Absolute Return assets seek to achieve a targeted return independent of any benchmark or other standard.

## Equity Hedge Assets

- Equity Hedge assets seek to hedge the equity exposure and are usually negatively correlated with equities.

## Equity Return Assets

- Equity Return assets seek to return above-average equity returns through more complex strategies, i.e., equity long/short and event driven/credit strategies.

## Private Investments

- Investments in private companies, or investment vehicles that aim to provide higher-than-market returns through a longer-term, illiquid investment strategy.

Source: Morgan Stanley Wealth Management Global Investment Office

Past performance is no guarantee of future results. Estimates of future performance are based on assumptions that may not be realized. This material is not a solicitation of any offer to buy or sell any security or other financial instrument or to participate in any trading strategy. Please refer to important information, disclosures and qualifications at the end of this material.

## Major Asset Classes



## Basic Tenets of Investing



## Asset Allocation & Diversification



# The Value & Wonder of Compound Interest

Definition: “Compound interest is the addition of interest to the principal sum of a loan or deposit, or in other words, interest on interest. It is the result of reinvesting interest, rather than paying it out, so that interest in the next period is then earned on the principal sum plus previously accumulated interest.”

## Simple Interest

	Interest Earned	Total
Today	\$ -	\$ 100.00
Year 1	\$ 10.00	\$ 110.00
Year 2	\$ 10.00	\$ 120.00
Year 3	\$ 10.00	\$ 130.00
Year 4	\$ 10.00	\$ 140.00
Year 5	\$ 10.00	\$ 150.00
Year 6	\$ 10.00	\$ 160.00
Year 7	\$ 10.00	\$ 170.00
Year 8	\$ 10.00	\$ 180.00
Year 9	\$ 10.00	\$ 190.00
Year 10	\$ 10.00	\$ 200.00

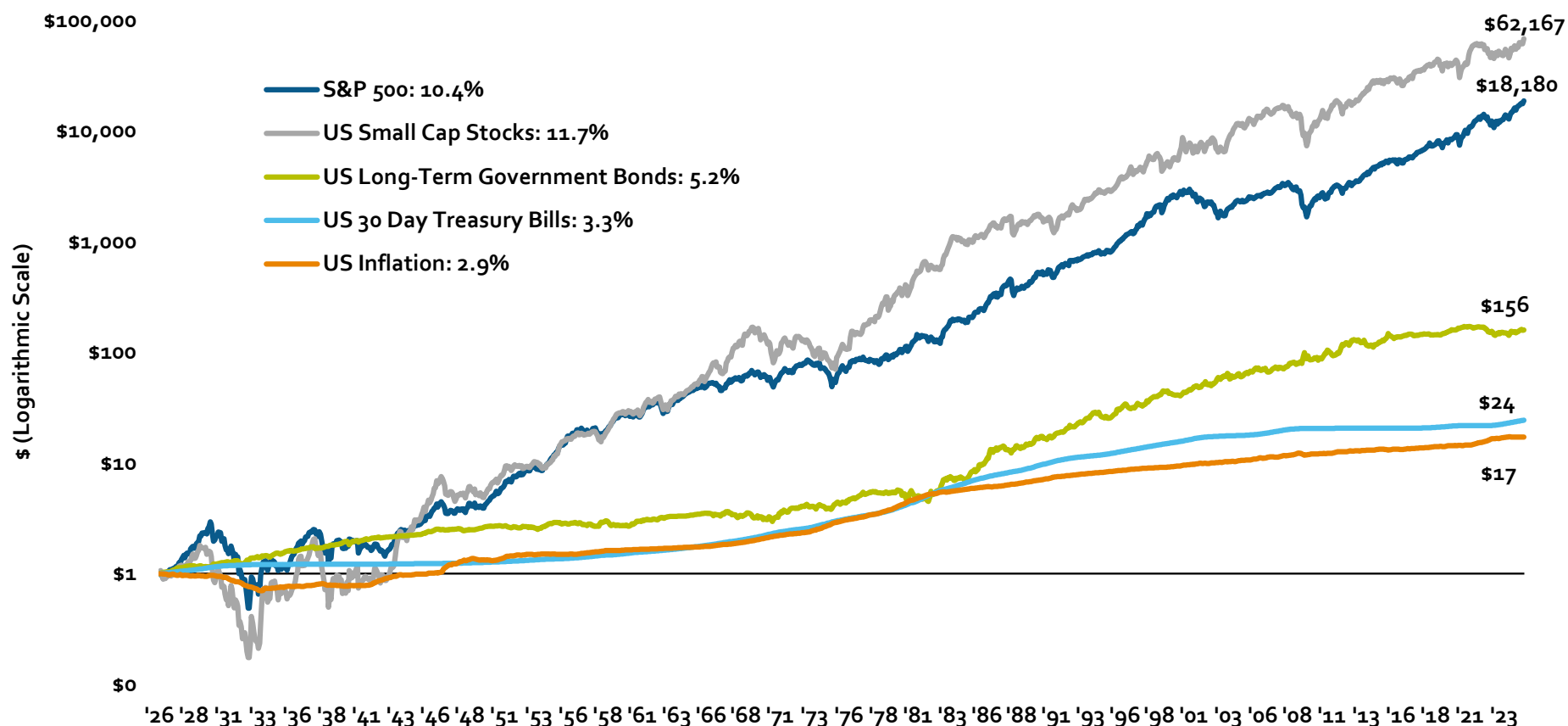
## Compound Interest

	Interest Earned	Total
Today	\$ -	\$ 100.00
Year 1	\$ 10.00	\$ 110.00
Year 2	\$ 11.00	\$ 121.00
Year 3	\$ 12.10	\$ 133.10
Year 4	\$ 13.31	\$ 146.41
Year 5	\$ 14.64	\$ 161.05
Year 6	\$ 16.11	\$ 177.16
Year 7	\$ 17.72	\$ 194.87
Year 8	\$ 19.49	\$ 214.36
Year 9	\$ 21.44	\$ 235.79
Year 10	\$ 23.58	\$ 259.37

Past performance is no guarantee of future results. Estimates of future performance are based on assumptions that may not be realized. This material is not a solicitation of any offer to buy or sell any security or other financial instrument or to participate in any trading strategy. Please refer to important information, disclosures and qualifications at the end of this material.

# Successful Investing Involves Patience and Fortitude

Cumulative Total Return of \$1 January 31, 1926 – December 31, 2024



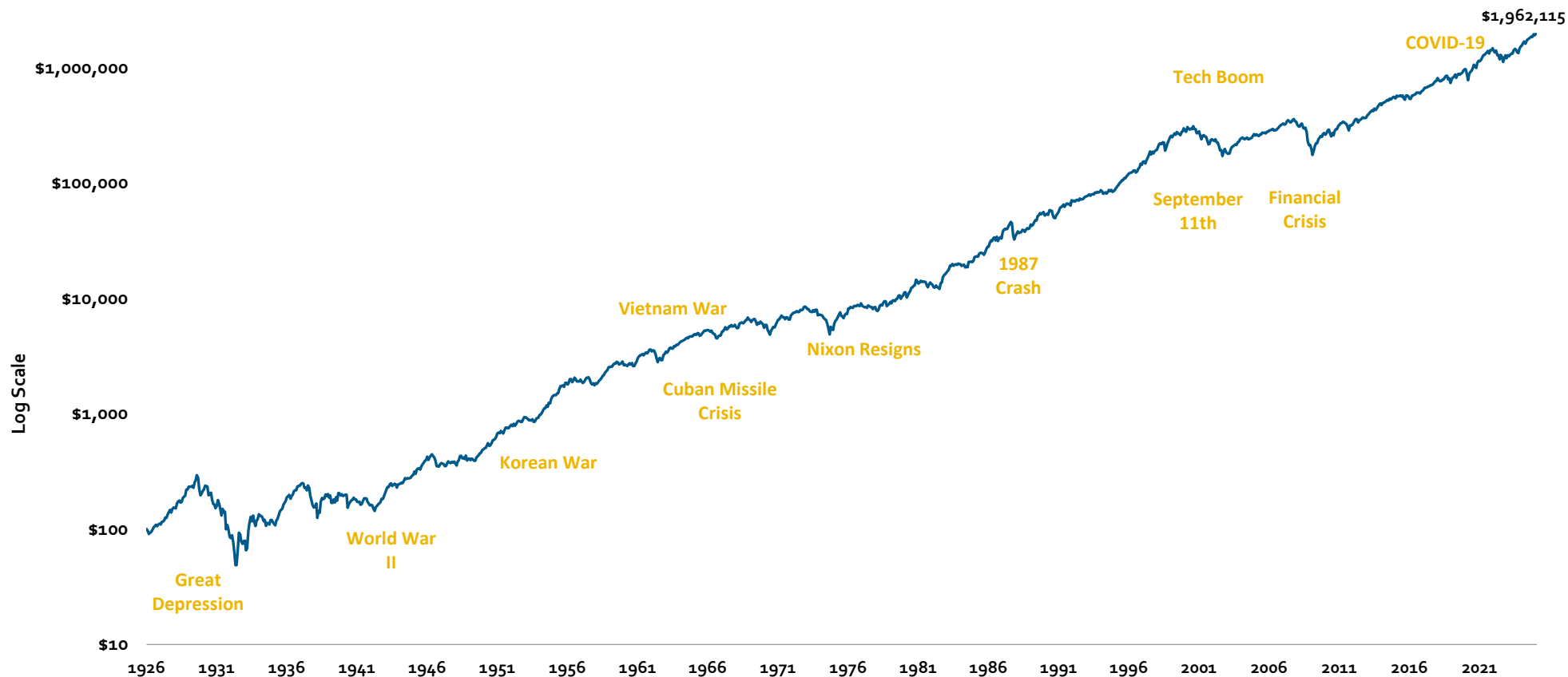
Source: Calculated by Morgan Stanley Wealth Management GIC using data provided by Morningstar. (c) 2020 Morningstar, Inc. All rights reserved. Used with permission. This information contained herein: (i) is proprietary to Morningstar and/or its content providers; (ii) may not be copied or distributed; 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. Aside from the S&P 500, all indices shown above are Ibbotson indices. The hypothetical \$1 investment is for illustrative purposes only. It does not represent the performance of any specific investment. For more information about the risks to hypothetical performance please refer to the Risk Considerations section at the end of this material.

Past performance is no guarantee of future results. Estimates of future performance are based on assumptions that may not be realized. This material is not a solicitation of any offer to buy or sell any security or other financial instrument or to participate in any trading strategy. Please refer to important information, disclosures and qualifications at the end of this material.

# Over the Long Term, S&P 500 Has Grown Despite Negative Events

S&P 500: Growth of \$100

Monthly data: January 31, 1926 – January 31, 2025



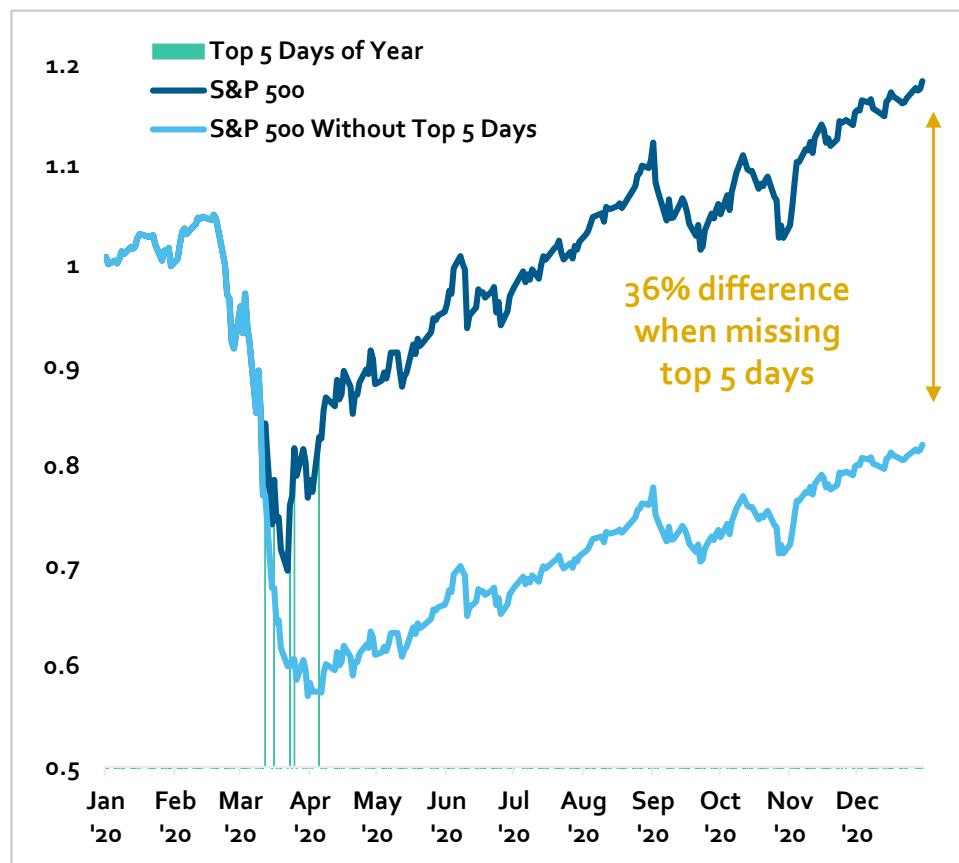
Source: FactSet, Ibbotson, Calculated by Morgan Stanley Wealth Management GIC using data provided by Morningstar. (c) 2023 Morningstar, Inc. All rights reserved. Used with permission. This information contained herein: (i) is proprietary to Morningstar and/or its content providers; (ii) may not be copied 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. Past performance is no guarantee of future results. Estimates of future performance are based on assumptions that may not be realized. This material is not a solicitation of any offer to buy or sell any security or other financial instrument or to participate in any trading strategy. Please refer to important information, disclosures and qualifications at the end of this material.

# Market Timing Can Be a Costly Strategy

Market timing is difficult for any investor. What's more, it runs the risk of missing out on the market's best days, which are crucial for long-run returns.

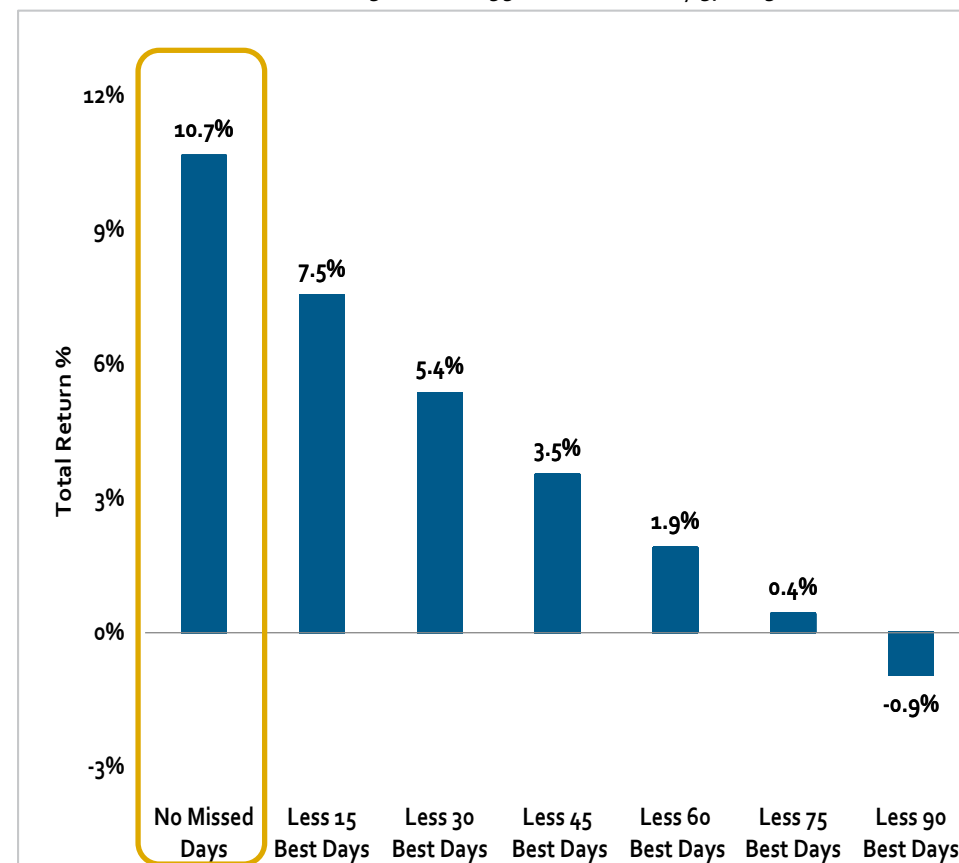
## The Best Days Often Happen During the Worst Times<sup>1</sup>

S&P 500 Total Returns in 2020



## Stay Invested to Ensure You Don't Miss the Market's Best Days<sup>2</sup>

Annualized Total Returns of S&P 500 Since 1990<sup>1</sup> as of February 5, 2025

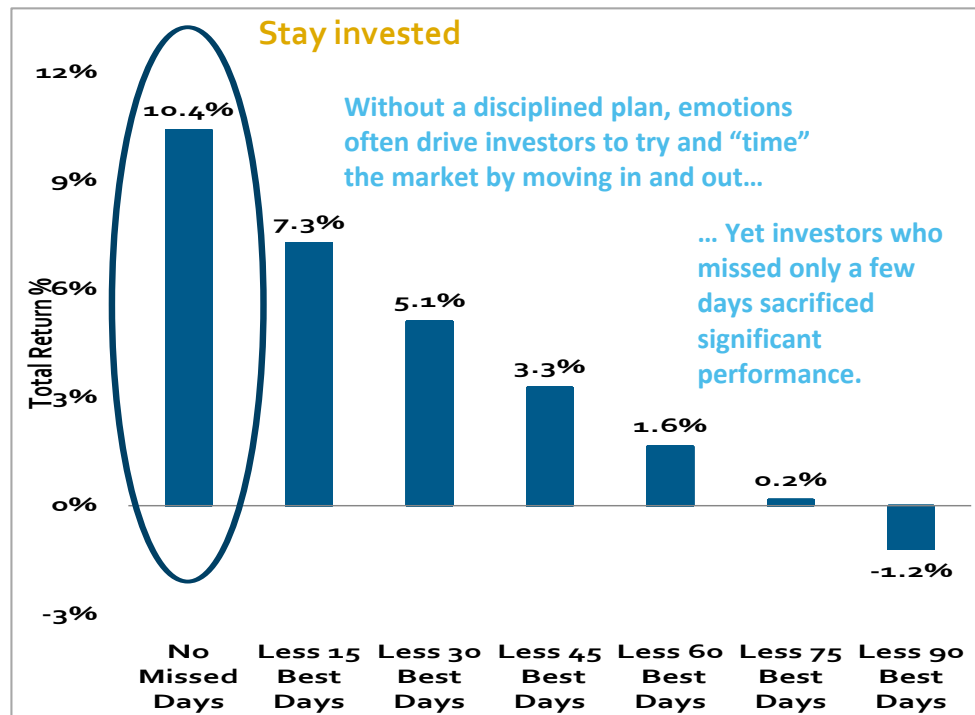


Source: Bloomberg, FactSet, Morgan Stanley Wealth Management GIO. (1) Best days are defined as the days with the highest single-day returns in the S&P 500. (2) Down markets defined as a 10% or greater decline from trailing one year peak in S&P 500.

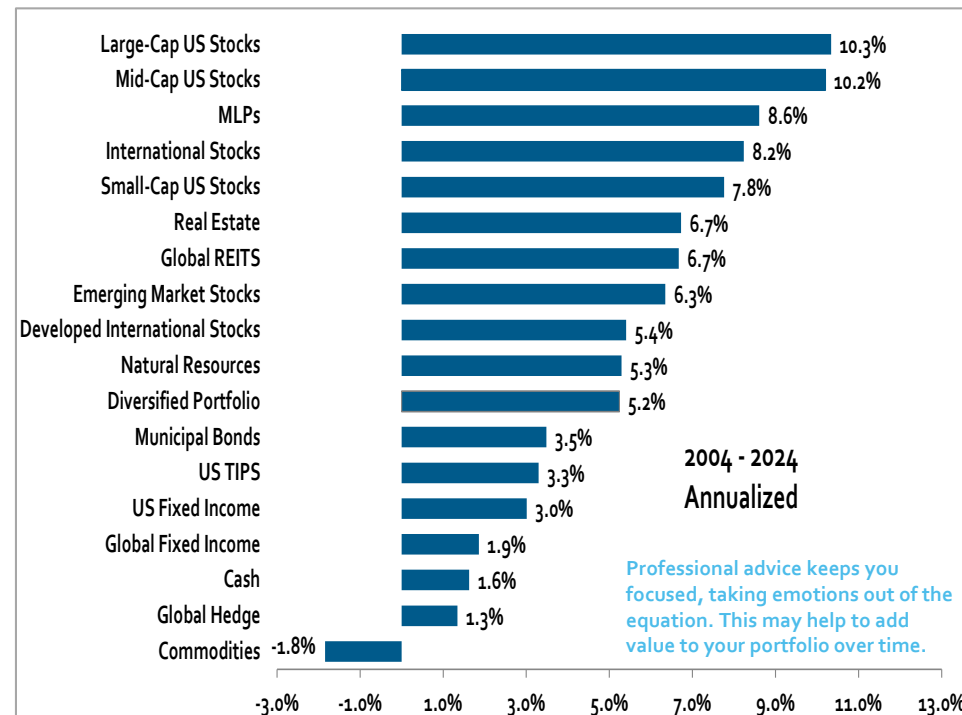
Past performance is no guarantee of future results. Estimates of future performance are based on assumptions that may not be realized. This material is not a solicitation of any offer to buy or sell any security or other financial instrument or to participate in any trading strategy. Please refer to important information, disclosures and qualifications at the end of this material.

# Going It Alone – Without a Plan – Can Be Costly

Annualized Total Returns of S&P 500 (1990- December 2022)  
As of December 31, 2024 (Total Return %)



20-Year Annualized Returns by Asset Class (2002– 2022)  
As of December 31, 2024



Source: Morgan Stanley Wealth Management GIC; Bloomberg; Dalbar. Past performance is no guarantee of future results. It is not possible to directly invest in an index. Oil is represented by the change in price of the NYMEX Light Sweet Crude Future contract. Contract size is 1,000 barrels with a contract price quoted in US Dollars and Cents per barrel. Delivery dates take place every month of the year. Gold is represented by the change in the spot price of gold in USD per ounce. Homes are represented by the National Association of Realtors’ (NAR) Existing One Family Home Sales Median Price Index. Stocks are represented by the S&P 500 Index, an unmanaged index that consists of the common stocks of 500 large-capitalization companies, within various industrial sectors, most of which are listed on the New York Stock Exchange. Bonds are represented by the Barclays US Aggregate Bond Index, an unmanaged market-weighted index that consists of investment-grade corporate bonds (rated BBB or better), mortgages and US Treasury and government agency issues with at least 1 year to maturity. International stocks are represented by the MSCI EAFE Index, a broad-based measure of international stock performance. Inflation is represented by the Consumer Price Index. Average Investor is represented by Dalbar’s average asset allocation investor return, which utilizes the net of aggregate mutual fund sales, redemptions and exchanges each month as a measure of investor behavior. Returns are annualized (and total return where applicable) and represent the 20-year period ending 12/31/18 to match Dalbar’s most recent analysis. **Average Investor returns include fees and expenses, but the returns for the other asset classes shown do not and, therefore, the difference in returns would be less significant than shown had fees and expenses been taken into account.**

Source: FactSet, Morgan Stanley Wealth Management GIC. Note: Total returns for each category are based on the 1998– 2018 period. Best days are defined as the days with the highest single-day returns in the S&P 500. 15 best days in descending order: 10/13/2008; 10/28/2008; 03/23/2009; 11/13/2008; 11/24/2008; 03/10/2009; 11/21/2008; 07/24/2002; 09/30/2008; 07/29/2002; 12/16/2008; 10/28/1997; 09/08/1998; 01/03/2001; 12/26/2018.

Past performance is no guarantee of future results. Estimates of future performance are based on assumptions that may not be realized. This material is not a solicitation of any offer to buy or sell any security or other financial instrument or to participate in any trading strategy. Please refer to important information, disclosures and qualifications at the end of this material.



# It's Easy to Let Emotions Get in the Way

Having a plan and sticking to it can help you avoid common mistakes such as buying and selling at the wrong time out of panic or exuberance.



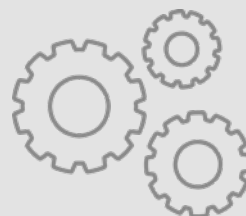
Source: Morgan Stanley Wealth Management GIO

Past performance is no guarantee of future results. Estimates of future performance are based on assumptions that may not be realized. This material is not a solicitation of any offer to buy or sell any security or other financial instrument or to participate in any trading strategy. Please refer to important information, disclosures and qualifications at the end of this material.

## Major Asset Classes



## Basic Tenets of Investing

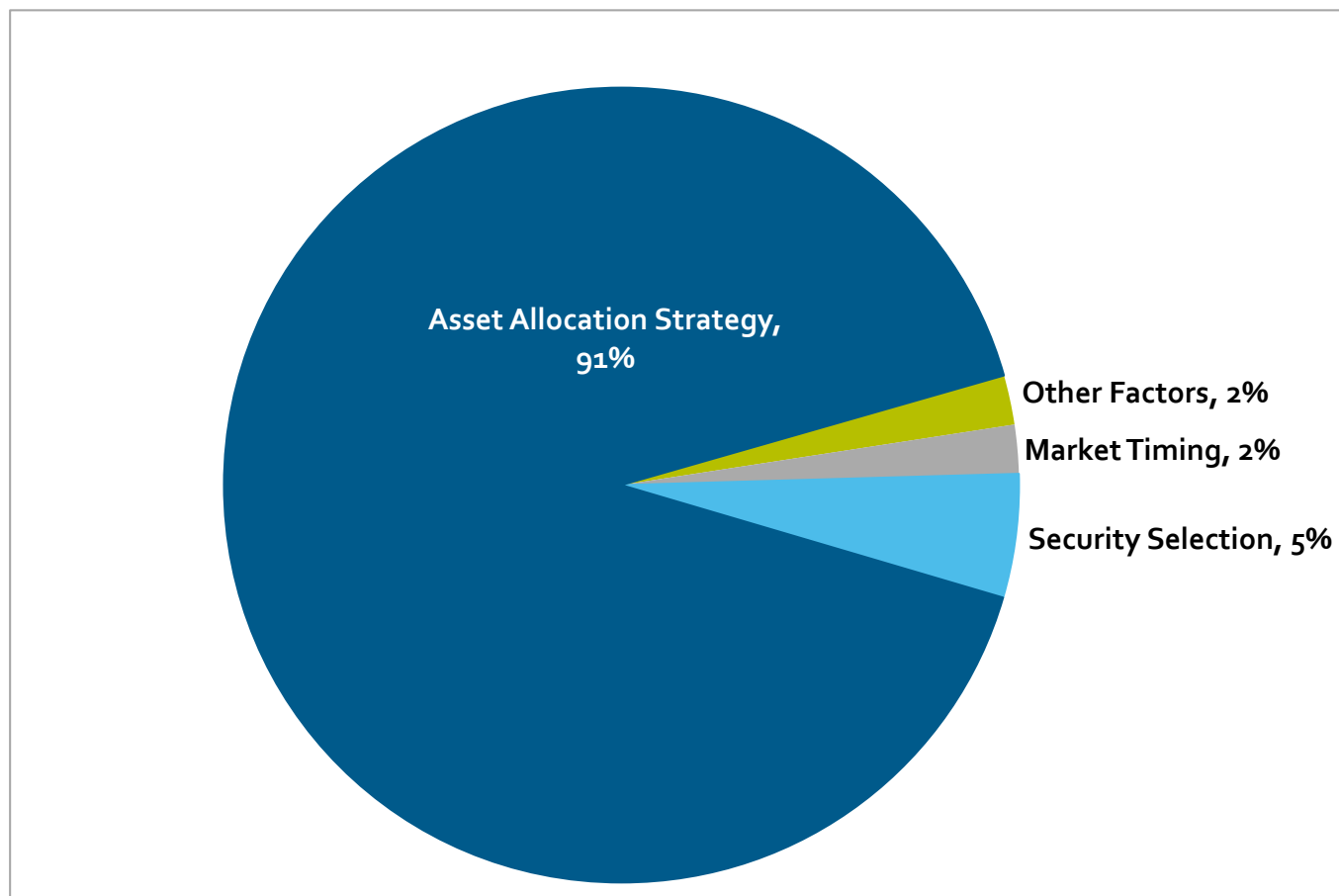


## Asset Allocation & Diversification



# Asset Allocation – The Most Important Determinant of Risk Exposures and Investment Outcomes

Potential Sources of Return Variation



Source: Roger G. Ibbotson. *Does Asset Allocation Policy Explain 10, 90 or 100 Percent of Performance?* Financial Analyst Journal, January/February 2000; Brinson, Singer and Beebower. *Determination of Performance II: An Update*, Financial Analyst Journal, May/June 1991. Based on US pension-fund data from 1977 to 1987.

Past performance is no guarantee of future results. Estimates of future performance are based on assumptions that may not be realized. This material is not a solicitation of any offer to buy or sell any security or other financial instrument or to participate in any trading strategy. Please refer to important information, disclosures and qualifications at the end of this material.

# Effective Asset Allocation Depends on Understanding Both Risk and Return

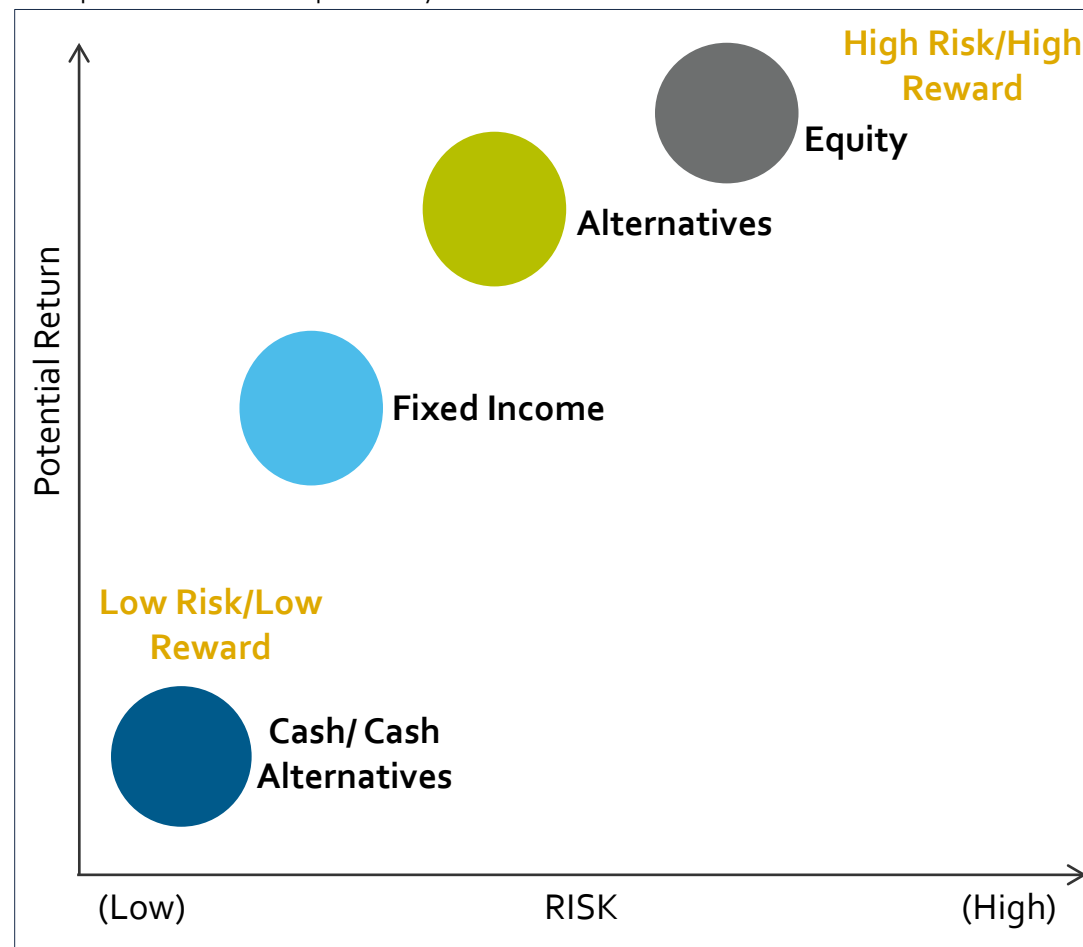
Various asset classes tend to have different risk and return characteristics.

Typically, the higher the potential risk, the higher the potential return for an asset class, and the lower the risk, the lower the potential return.

20-Year Annualized Risk and Return  
Monthly data as of January 31, 2025

Asset Class	Annualized Return	Annualized Volatility
Cash	1.6%	0.6%
Fixed Income	3.1%	4.2%
Alternatives	4.8%	5.7%
Equity	10.6%	15.0%

Annualized Risk and Return of Asset Classes  
Example for Illustrative Purposes Only



Source: FactSet, Bloomberg, Morgan Stanley Wealth Management Global Investment Office. Cash is represented by 90-Day T-bills: Citigroup 3M T-Bill Index; Equity by US Large Cap Equities: S&P 500 Index; Fixed Income by US Investment Grade Bonds: Bloomberg US Aggregate Index; Alternatives by HFRI Fund Weighted Composite Index.

This slide is an educational presentation of performance that reflect an allocation of assets by type or class, which may educate investors about historical trends regarding asset classes.

These are not investable securities and the returns displayed do not account for any applicable advisory fees or expenses. However, in an advisory relationship there will be applicable advisory fees and expenses, the deduction of which, when compounded over a period of years, would decrease returns.

Past performance is no guarantee of future results. Estimates of future performance are based on assumptions that may not be realized. This material is not a solicitation of any offer to buy or sell any security or other financial instrument or to participate in any trading strategy. Please refer to important information, disclosures and qualifications at the end of this material.

# Diversified Portfolios Built With Uncorrelated Asset Classes

## Asset Class Correlations<sup>1</sup>

Monthly Data as of January 31, 2025; Managed Futures as of December 31, 2024

	Cash	US Investment Grade Bonds	High Yield Bonds (USD)	Int'l Investment Grade Bonds (Hedged to USD)	Large Cap Stocks	Developed Non-US Stocks	Emerging Market Stocks	Managed Futures	Hedged Strategies	Commodities
Cash	1.00									
US Investment Grade Bonds	0.16	1.00								
High Yield Bonds (USD)	0.00	0.32	1.00							
Int'l Investment Grade Bonds (Hedged to USD)	0.20	0.78	0.27	1.00						
Large Cap Stocks	0.01	0.21	0.67	0.19	1.00					
Developed Non-US Stocks	-0.04	0.19	0.64	0.17	0.77	1.00				
Emerging Market Stocks	-0.03	0.12	0.72	0.09	0.68	0.74	1.00			
Managed Futures	0.04	0.25	-0.09	0.25	-0.05	0.02	-0.02	1.00		
Hedged Strategies	0.12	0.08	0.61	0.09	0.59	0.59	0.68	0.18	1.00	
Commodities	-0.01	0.00	0.38	-0.09	0.33	0.41	0.43	0.14	0.41	1.00

Investing in uncorrelated asset classes is key to risk and return management

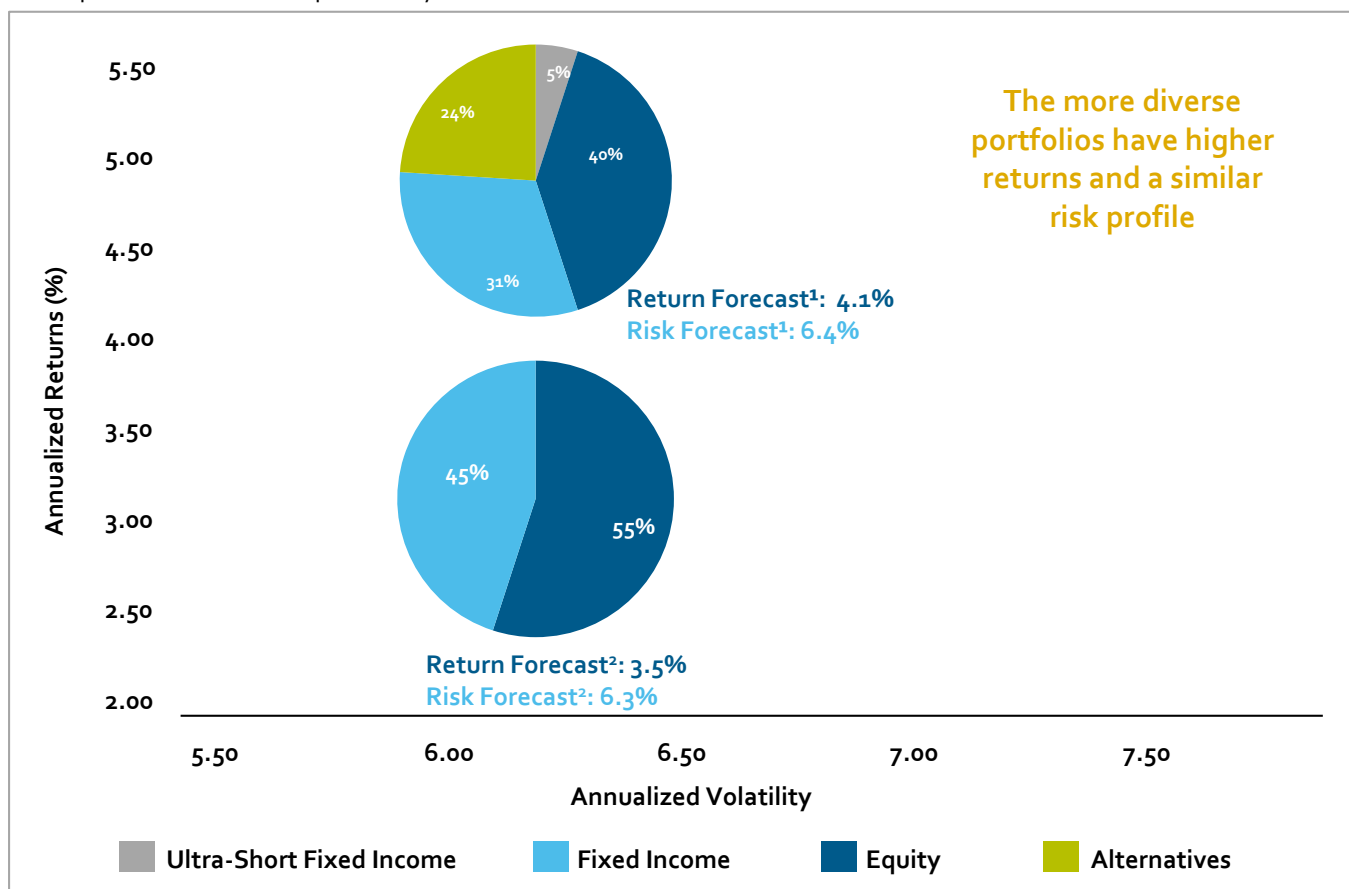
Source: FactSet, Bloomberg, Morgan Stanley Wealth Management Global Investment Office. (1) Based on monthly returns. Correlation is a statistical method of measuring the strength of a linear relationship between two variables. The correlation between two variables can assume any value from -1.00 to +1.00, inclusive. Hedged strategies consist of hedge funds and managed futures. Indices used for this analysis include: 90-Day T-bills for Cash, Bloomberg US Aggregate for US Investment Grade, Bloomberg Global High Yield for High Yield, Bloomberg Global Aggregate ex US for Intl Investment Grade, S&P 500 for US Large-Cap Equities, MSCI EAFE for International Equities, MSCI EM IMI for EM, Credit Suisse Managed Futures for Managed Futures, HFRI Fund of Funds for Hedged Strategies, Bloomberg Commodity Index for Commodities.

Past performance is no guarantee of future results. Estimates of future performance are based on assumptions that may not be realized. This material is not a solicitation of any offer to buy or sell any security or other financial instrument or to participate in any trading strategy. Please refer to important information, disclosures and qualifications at the end of this material.

# Diversification Can Positively Impact Portfolios

## Diversified Portfolios Can Provide Better Risk and Return Opportunities

Example for Illustrative Purposes Only



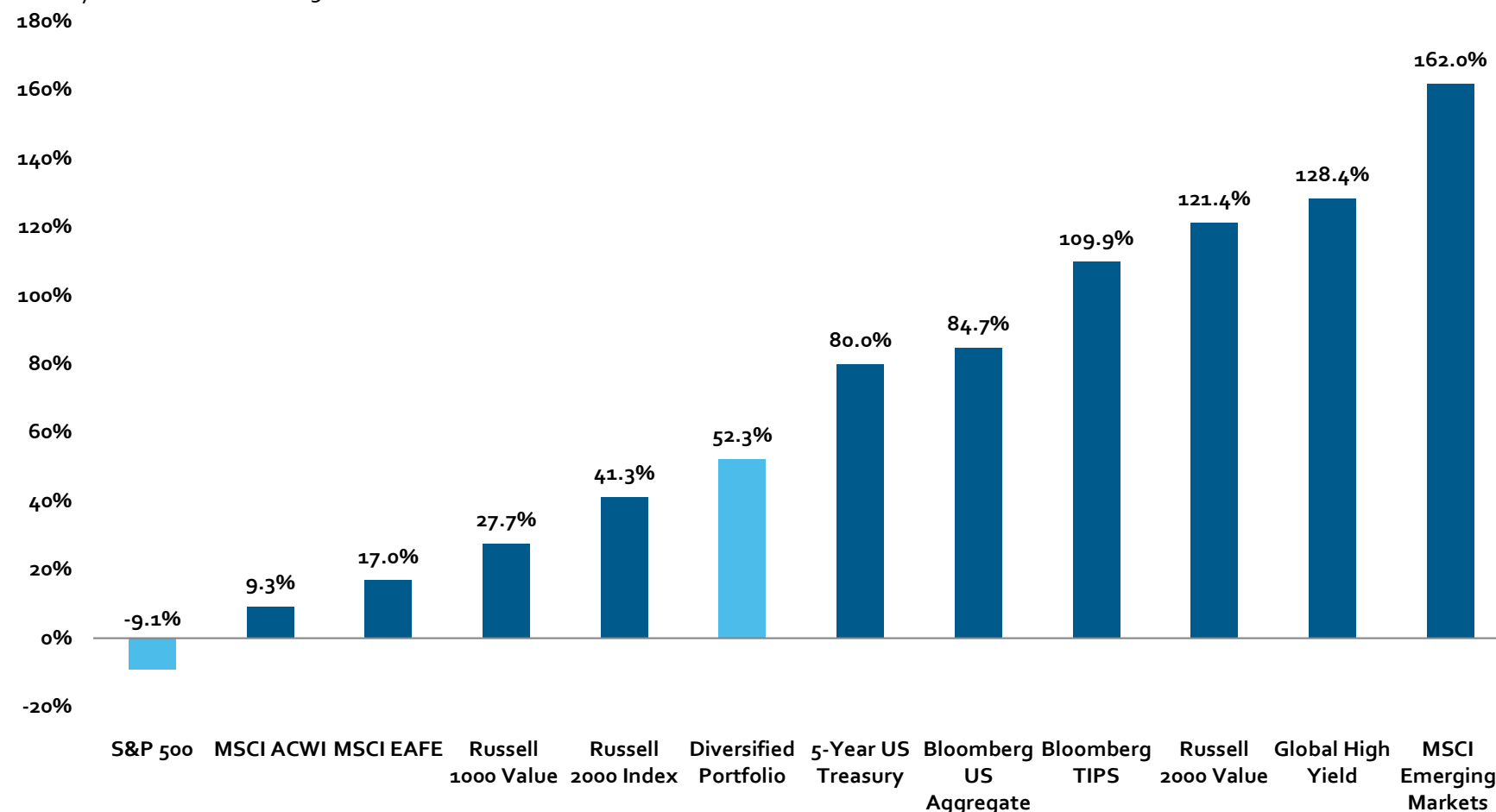
Source: Bloomberg, FactSet, Morgan Stanley Wealth Management GIC. Global Equities: MSCI AC World Index. US Bonds: Bloomberg US Aggregate Index. Ultrashort Fixed Income: Citigroup 3-Month Treasury Bill Index. Alternatives consist of REITs, MLPs, Absolute Return Assets and Equity Hedge Assets as found in GIC Model 3. (1) Forecasts are based on capital market assumptions as published in the *GIC's Inputs for GIC Asset Allocation: Annual Update of Capital Market Assumptions*, March 31, 2021. (2) Morgan Stanley Wealth Management GIC. Returns and Volatility are annualized numbers; GIC Forecast is a 7-year forecast based on strategic return assumptions in the *Inputs for GIC Asset Allocation: Annual Update of Capital Market Assumptions*, March 31, 2021; equities represented by the Russell 1000 Index and bonds by the Bloomberg Capital US Aggregate Index.

Past performance is no guarantee of future results. Estimates of future performance are based on assumptions that may not be realized. This material is not a solicitation of any offer to buy or sell any security or other financial instrument or to participate in any trading strategy. Please refer to important information, disclosures and qualifications at the end of this material.

# “Lost Decade” (2000-2010) Demonstrates the Importance of Global Diversification and Asset Allocation

## Total Returns

January 2000-December 2009



Source: FactSet, Morgan Stanley Wealth Management Global Investment Office. Note: Note: Diversified portfolio is comprised of 40% MSCI ACWI, 40% Bloomberg US Aggregate, 5% FTSE US 3 mo. T-Bills, 9% HFRX Global Hedge Funds, 3% Bloomberg Commodity Index, and 3% FTSE NAREIT All Equity REITS Total Return Index. These are not investable securities and the returns displayed do not account for any applicable advisory fees or expenses. However, in an advisory relationship there will be applicable advisory fees and expenses, the deduction of which, when compounded over a period of years, would decrease returns. Past performance is no guarantee of future results. Estimates of future performance are based on assumptions that may not be realized. This material is not a solicitation of any offer to buy or sell any security or other financial instrument or to participate in any trading strategy. Please refer to important information, disclosures and qualifications at the end of this material.

# Asset Class Returns 2015 to 2025 YTD

YTD return through January 31, 2025 ; In YTD data, Managed Futures as of December 31, 2024

2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025 YTD	(9/14-9/24) Ann. CAGR	10 yrs Ann. Volatility
US Equities 1.4%	MLPs 18.3%	EM Equities 37.8%	Cash 1.9%	US Equities 31.5%	EM Equities 18.8%	MLPs 39.9%	MLPs 30.5%	MLPs 26.3%	US Equities 25.0%	MLPs 8.8%	US Equities 13.4%	MLPs 22.4%
EMD 1.2%	High Yield 14.3%	DM Int'l Equities 25.7%	US Debt 0.0%	Global Equities 27.3%	US Equities 18.4%	US Equities 28.7%	Managed Futures 19.1%	US Equities 26.3%	MLPs 24.1%	DM Int'l Equities 5.3%	Global Equities 10.0%	EM Equities 18.3%
US Debt 0.5%	US Equities 11.9%	Global Equities 24.7%	DM Int'l Debt -0.2%	REITs 23.3%	Global Equities 16.9%	Commod. 27.1%	Commod. 13.8%	Global Equities 22.8%	Global Equities 18.0%	Commod. 3.6%	DM Int'l Equities 6.3%	Commod. 16.0%
Cash 0.0%	EM Equities 11.8%	US Equities 21.8%	Inflation-Linked -1.3%	DM Int'l Equities 22.8%	Inflation-Linked 11.0%	REITs 23.2%	Cash 1.5%	DM Int'l Equities 18.9%	High Yield 9.2%	Global Equities 3.4%	Diversified Portfolio 5.1%	US Equities 15.9%
DM Int'l Equities -0.3%	Commod. 11.4%	REITs 15.1%	High Yield -4.1%	EM Equities 18.8%	Diversified Portfolio 10.0%	Global Equities 19.0%	Global Hedge -4.4%	High Yield 14.0%	Diversified Portfolio 8.5%	US Equities 2.8%	REITs 4.6%	Global Equities 15.3%
REITs -0.4%	EMD 10.2%	Diversified Portfolio 12.3%	EMD -4.3%	Diversified Portfolio 16.2%	DM Int'l Debt 9.4%	DM Int'l Equities 11.9%	Inflation-Linked -11.8%	Diversified Portfolio 11.8%	EM Equities 8.0%	Diversified Portfolio 1.8%	EM Equities 4.4%	REITs 15.0%
Managed Futures -0.9%	Global Equities 8.5%	High Yield 10.4%	US Equities -4.4%	EMD 15.0%	DM Int'l Equities 8.4%	Diversified Portfolio 8.8%	High Yield -12.7%	EMD 11.1%	EMD 6.5%	EM Equities 1.8%	High Yield 4.3%	DM Int'l Equities 14.2%
Inflation-Linked -1.4%	Diversified Portfolio 5.2%	EMD 10.3%	Diversified Portfolio -4.6%	High Yield 12.6%	US Debt 7.5%	Managed Futures 8.2%	Diversified Portfolio -13.0%	EM Equities 10.2%	Cash 5.4%	REITs 1.7%	Managed Futures 3.5%	EMD 9.7%
Diversified Portfolio -1.6%	Inflation-Linked 4.7%	DM Int'l Debt 6.7%	REITs -5.3%	Managed Futures 9.0%	High Yield 7.0%	Inflation-Linked 6.0%	US Debt -13.0%	REITs 9.5%	Global Hedge 5.3%	EMD 1.4%	EMD 3.3%	Managed Futures 9.3%
Global Equities -1.8%	REITs 4.6%	Global Hedge 6.0%	Managed Futures -6.7%	US Debt 8.7%	Global Hedge 6.8%	Global Hedge 3.7%	DM Int'l Equities -13.9%	US Debt 5.5%	DM Int'l Equities 4.4%	High Yield 1.4%	Inflation-Linked 2.5%	High Yield 9.1%
High Yield -2.7%	US Debt 2.6%	US Debt 3.5%	Global Hedge -6.7%	Global Hedge 8.6%	EMD 5.3%	High Yield 1.0%	EMD -17.8%	Cash 5.3%	Managed Futures 2.9%	Managed Futures 1.3%	US Debt 1.8%	Diversified Portfolio 8.3%
DM Int'l Debt -2.9%	Global Hedge 2.5%	Managed Futures 3.3%	Global Equities -8.9%	Inflation-Linked 8.4%	Managed Futures 1.9%	Cash 0.0%	Global Equities -17.9%	Inflation-Linked 3.9%	Inflation-Linked 1.8%	Inflation-Linked 1.3%	Global Hedge 1.8%	DM Int'l Debt 8.0%
Global Hedge -3.6%	DM Int'l Debt 1.8%	Inflation-Linked 3.0%	MLPs -12.4%	MLPs 6.6%	Cash 0.6%	US Debt -1.5%	US Equities -18.1%	DM Int'l Debt 3.5%	REITs 1.3%	Global Hedge 1.0%	MLPs 1.7%	Inflation-Linked 6.3%
EM Equities -14.6%	DM Int'l Equities 1.6%	Cash 0.8%	Commod. -13.0%	Commod. 5.4%	Commod. -3.5%	EMD -1.8%	DM Int'l Debt -18.5%	Global Hedge 3.1%	US Debt 1.3%	US Debt 0.5%	Cash 1.7%	US Debt 6.2%
Commod. -24.7%	Cash 0.3%	Commod. 0.7%	DM Int'l Equities -13.3%	DM Int'l Debt 5.3%	REITs -9.3%	EM Equities -2.3%	EM Equities -19.8%	Managed Futures -2.8%	Commod. 0.1%	DM Int'l Debt 0.5%	DM Int'l Debt -0.5%	Global Hedge 5.2%
MLPs -32.6%	Managed Futures -6.8%	MLPs -6.5%	EM Equities -14.3%	Cash 2.3%	MLPs -28.8%	DM Int'l Debt -7.3%	REITs -23.4%	Commod. -12.6%	DM Int'l Debt -4.7%	Cash 0.4%	Commod. -1.7%	Cash 1.6%

Source: Bloomberg, Morgan Stanley Wealth Management GIO; Indices used= Cash: FTSE 3Month Treasury Bill, Global Equities: MSCI AC World, REITs: FTSE EPRA Nareit Global, Commodity: Bloomberg Commodity Index, Managed Futures: Credit Suisse Managed Futures Index, MLPs: Alerian MLP, Global Hedge: HFR Global, Inflation-Linked: Bloomberg US Treasury Inflation Protected Notes, US Debt: Bloomberg US Aggregate, High Yield: Bloomberg Global High Yield, EMD: JP Morgan GBI-EM Global Diversified Composite, DM Int'l Debt-Bloomberg Global Majors, EM Equities: MSCI Emerging Markets, DM Int'l Equities: MSCI EAFE, US Equities: S&P 500. Diversified portfolio is comprised of 40% MSCI ACWI, 40% Bloomberg US Aggregate, 5% 3 mo. T-Bills, 9% HFRXGL Global Hedge, 3% Bloomberg Commodity Index, and 3% FTSE EPRA/NAREIT Global Index.

Past performance is no guarantee of future results. Estimates of future performance are based on assumptions that may not be realized. This material is not a solicitation of any offer to buy or sell any security or other financial instrument or to participate in any trading strategy. Please refer to important information, disclosures and qualifications at the end of this material.



**Morgan Stanley Wealth Management is the trade name of Morgan Stanley Smith Barney LLC, a registered broker-dealer in the United States.**

The sole purpose of this material is to inform, and it in no way is intended to be an offer or solicitation to purchase or sell any security, other investment or service, or to attract any funds or deposits. Investments mentioned may not be appropriate for all clients. Any product discussed herein may be purchased only after a client has carefully reviewed the offering memorandum and executed the subscription documents. Morgan Stanley Wealth Management has not considered the actual or desired investment objectives, goals, strategies, guidelines, or factual circumstances of any investor in any fund(s). Before making any investment, each investor should carefully consider the risks associated with the investment, as discussed in the applicable offering memorandum, and make a determination based upon their own particular circumstances, that the investment is consistent with their investment objectives and risk tolerance. Morgan Stanley Smith Barney LLC offers investment program services through a variety of investment programs, which are opened pursuant to written client agreements. Each program offers investment managers, funds and features that are not available in other programs; conversely, some investment managers, funds or investment strategies may be available in more than one program.

Morgan Stanley's investment advisory programs may require a minimum asset level and, depending on your specific investment objectives and financial position, may not be appropriate for you. Please see the Morgan Stanley Smith Barney LLC program disclosure brochure (the "Morgan Stanley ADV") for more information in the investment advisory programs available. The Morgan Stanley ADV is available at [www.morganstanley.com/ADV](http://www.morganstanley.com/ADV).

**Sources of Data.** Information in this material in this report 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. All opinions included in this material constitute the Firm's judgment as of the date of this material and are subject to change without notice. This material was not prepared by the research departments of Morgan Stanley & Co. LLC or Morgan Stanley Smith Barney LLC. Some historical figures may be revised due to newly identified programs, firm restatements, etc.

**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. 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 effect transactions through broker-dealers other than Morgan Stanley or our affiliates. In such instances, 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 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.

**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. Separately, certain strategies managed or sub-advised by us or our affiliates, including but not limited to MSIM and Eaton Vance Management ("EVM") and its investment affiliates, may be included in your account. 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.

**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 material 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 Morgan Stanley Pathway Funds 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.

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

**The Morgan Stanley Pathway Funds, Firm Discretionary UMA Model Portfolios,** and other asset allocation or any other model portfolios discussed in this material are available only to investors participating in Morgan Stanley Consulting Group advisory programs. For additional information on the Morgan Stanley Consulting Group advisory programs, see the applicable ADV brochure, available at [www.morganstanley.com/ADV](http://www.morganstanley.com/ADV) or from your Morgan Stanley Financial Advisor or Private Wealth Advisor. To learn more about the Morgan Stanley Pathway Funds, visit the Funds' website at <https://www.morganstanley.com/wealth-investmentsolutions/cgcm>. Consulting Group is a business of Morgan Stanley.

**Morgan Stanley Pathway Program Asset Allocation Models** There are model portfolios corresponding to five risk-tolerance levels available in the Pathway program. Model 1 is the least aggressive portfolio and consists mostly of bonds. As the model numbers increase, the models have higher allocations to equities and become more aggressive. Pathway is a mutual fund asset allocation program. In constructing the Pathway Program Model Portfolios, Morgan Stanley Wealth Management uses, among other things, model asset allocations produced by Morgan Wealth Management's Global Investment Committee (the "GIC"). The Pathway Program Model Portfolios are specific to the Pathway program (based on program features and parameters, and any other requirements of Morgan Stanley Wealth Management's Consulting Group). The Pathway Program Model Portfolios may therefore differ in some respects from model portfolios available in other Morgan Stanley Wealth Management programs or from asset allocation models published by the Global Investment Committee.

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."

**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](http://www.morganstanley.com). Please read it carefully before investing.**

**Money Market Funds:** You could lose money in money market funds. Although money market funds classified as government funds (i.e., money market funds that invest 99.5% of total assets in cash and/or securities backed by the U.S government) and retail funds (i.e., money market funds open to natural person investors only) seek to preserve value at \$1.00 per share, they cannot guarantee they will do so. The price of other money market funds will fluctuate and when you sell shares they may be worth more or less than originally paid. Money market funds may impose a fee upon sale or temporarily suspend sales if liquidity falls below required minimums. During suspensions, shares would not be available for purchases, withdrawals, check writing or ATM debits. A money market fund investment is not insured or guaranteed by the Federal Deposit Insurance Corporation or other government agency. The Fund's sponsor has no legal obligation to provide financial support to the Fund, and you should not expect that the sponsor will provide financial support to the Fund at any time.

**Investors should carefully consider the investment objectives, risks, charges and expenses of a money market fund before investing. The prospectus contains this and other information about the money market fund. To obtain a prospectus, contact your Financial Advisor or visit the money market fund company's website. Please read the prospectus carefully before investing.**

**Exchange Funds** are private placement vehicles that enable holders of concentrated single-stock positions to exchange those stocks for a diversified portfolio. Investors may benefit from greater diversification by exchanging a concentrated stock position for fund shares without triggering a taxable event. These funds are available only to qualified investors and may only be offered by Financial Advisors who are qualified to sell alternative investments. Before investing, investors should consider the following:

- Dividends are pooled
- Investors may forfeit their stock voting rights
- Investment may be illiquid for several years
- Investments may be leveraged or contain derivatives
- Significant early redemption fees may apply
- Changes to the U.S. tax code, which could be retroactive (potentially disallowing the favorable tax treatment of exchange funds)
- Investment risk and potential loss of principal

#### 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**. Some funds also invest in foreign securities, which may involve currency risk. There is no assurance that the fund will achieve its investment objective. **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.

**Structured Investments** are complex and not appropriate for all investors. An investment in Structures Investments involve risks. These risks can include but are not limited to: (1) Fluctuations in the price, level or yield of underlying instruments, interest rates, currency values and credit quality, (2) Substantial or total loss of principal, (3) Limits on participation in appreciation of underlying instrument, (4) Limited liquidity, (5) Issuer credit risk and (6) Conflicts of Interest. There is no assurance that a strategy of using structured product for wealth preservation, yield enhancement, and/or interest rate risk hedging will meet its objectives.

**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. Alternative investments involve complex tax structures, tax inefficient investing, and delays in distributing important tax information. Clients should consult their own tax and legal advisors as Morgan Stanley Wealth Management does not provide tax or legal advice. All expressions of opinion are subject to change without notice and are not intended to be a forecast of future events or results. Further, opinions expressed herein may differ from the opinions expressed by Morgan Stanley Wealth Management and/or other businesses/affiliates of Morgan Stanley Wealth Management. This is not a "research report" as defined by FINRA Rule 2241 or a "debt research report" as defined by FINRA Rule 2242 and was not prepared by the Research Departments of Morgan Stanley Smith Barney LLC or Morgan Stanley & Co. LLC or its affiliates. Certain information contained herein may constitute forward-looking statements. Due to various risks and uncertainties, actual events, results or the performance of a fund may differ materially from those reflected or contemplated in such forward-looking statements. Clients should carefully consider the investment objectives, risks, charges, and expenses of a fund before investing. While the HFRI indices are frequently used, they have limitations (some of which are typical of other widely used indices). 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. This material is not to be reproduced or distributed to any other persons (other than professional advisors of the investors or prospective investors, as applicable, receiving this material) and is intended solely for the use of the persons to whom it has been delivered. This material is not for distribution to the general public. Past performance is no guarantee of future results. Actual results may vary. SIPC insurance does not apply to precious metals, other commodities, or traditional alternative investments. In Consulting Group's advisory programs, alternative investments are limited to US-registered mutual funds, separate account strategies and exchange-traded funds (ETFs) that seek to pursue alternative investment strategies or returns utilizing publicly traded securities. 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.

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.

As a diversified global financial services firm, Morgan Stanley 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 therefore engages in activities where Morgan Stanley interests may conflict with the interests of its clients, including the private investment funds it manages. Morgan Stanley 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. **Private Markets:** As part of the Morgan Stanley Private Markets – Access program, Morgan Stanley will be limited solely to a role as an introducer and will not be serving as a placement agent or adviser. Eligible investors must enroll in the program in order to see any investment opportunities. Investments require independent evaluation, due diligence, review & analysis. Neither Morgan Stanley nor any of its affiliates is making any recommendation to purchase or take any action of any sort and is not providing any advice on investments. Investors are asked to work directly with the issuer/sponsor and with your own independent (non-Morgan Stanley) financial, legal, accounting, tax, and other professional advisors to evaluate the investment opportunity.

Investors are responsible for complying with the terms of any applicable exemption from securities law requirements and any potential Private Company issuer restrictions for any sale of Private Company shares, and you must obtain your own legal counsel to advise you in connection with such requirements and Private Company issuer restrictions. You should consult with your third-party advisors regarding the risks of transacting in Private Company shares, including the risk of transacting in a market with little or no price transparency or liquidity. Morgan Stanley provides no opinion or view on the valuation of any Private Company shares, or the sufficiency, fairness or competitiveness of any price obtained. Private Securities do not trade on any national securities exchange and, as such, any potential liquidity (i.e., the potential for any buying interest that might satisfy your sell interest) in such Private Company shares is very limited.

---

### Virtual Currency Products (Cryptocurrencies)

**Buying, selling, and transacting in Bitcoin, Ethereum or other digital assets ("Digital Assets"), and related funds and products, is highly speculative and may result in a loss of the entire investment.** Risks and considerations include but are not limited to:

- Digital Assets have only been in existence for a short period of time and historical trading prices for Digital Assets have been highly volatile. The price of Digital Assets could decline rapidly, and investors could lose their entire investment.
- Certain Digital Asset funds and products, allow investors to invest on a more frequent basis than investors may withdraw from the fund or product, and interests in such funds or products are generally not freely transferrable. This means that, particularly given the volatility of Digital Assets, an investor will have to bear any losses with respect to its investment for an extended period of time and will not be able to react to changes in the price of the Digital Asset once invested (for example, by seeking to withdraw) as quickly as when making the decision to invest. Such Digital Asset funds and products, are intended only for persons who are able to bear the economic risk of investment and who do not need liquidity with respect to their investments.
- Given the volatility in the price of Digital Assets, the net asset value of a fund or product that invests in such assets at the time an investor's subscription for interests in the fund or product is accepted may be significantly below or above the net asset value of the product or fund at the time the investor submitted subscription materials.
- Certain Digital Assets are not intended to function as currencies but are intended to have other use cases. These other Digital Assets may be subject to some or all of the risks and considerations set forth herein, as well as additional risks applicable to such Digital Assets. Buyers, sellers and users of such Digital Assets should thoroughly familiarize themselves with such risks and considerations before transacting in such Digital Assets.
- The value of Digital Assets may be negatively impacted by future legal and regulatory developments, including but not limited to increased regulation of such Digital Assets. Any such developments may make such Digital Assets less valuable, impose additional burdens and expenses on a fund or product investing in such assets or impact the ability of such a fund or product to continue to operate, which may materially decrease the value of an investment therein.
- Due to the new and evolving nature of digital currencies and the absence of comprehensive guidance, many significant aspects of the tax treatment of Digital Assets are uncertain. Prospective investors should consult their own tax advisors concerning the tax consequences to them of the purchase, ownership and disposition of Digital Assets, directly or indirectly through a fund or product, under U.S. federal income tax law, as well as the tax law of any relevant state, local or other jurisdiction.
- Over the past several years, certain Digital Asset exchanges have experienced failures or interruptions in service due to fraud, security breaches, operational problems or business failure. Such events in the future could impact any fund's or product's ability to transact in Digital Assets if the fund or product relies on an impacted exchange and may also materially decrease the price of Digital Assets, thereby impacting the value of your investment, regardless of whether the fund or product relies on such an impacted exchange.
- Although any Digital Asset product and its service providers have in place significant safeguards against loss, theft, destruction and inaccessibility, there is nonetheless a risk that some or all of a product's Digital Asset could be permanently lost, stolen, destroyed or inaccessible by virtue of, among other things, the loss or theft of the "private keys" necessary to access a product's Digital Asset.
- Investors in funds or products investing or transacting in Digital Assets may not benefit to the same extent (or at all) from "airdrops" with respect to, or "forks" in, a Digital Asset's blockchain, compared to investors who hold Digital Assets directly instead of through a fund or product. Additionally, a "fork" in the Digital Asset blockchain could materially decrease the price of such Digital Asset.
- Digital Assets are not legal tender, and are not backed by any government, corporation or other identified body, other than with respect to certain digital currencies that certain governments are or may be developing now or in the future. No law requires companies or individuals to accept digital currency as a form of payment (except, potentially, with respect to digital currencies developed by certain governments where such acceptance may be mandated). Instead, other than as described in the preceding sentences, Digital Asset products' use is limited to businesses and individuals that are willing to accept them. If no one were to accept digital currencies, virtual currency products would very likely become worthless.
- Platforms that buy and sell Digital Assets can be hacked, and some have failed. In addition, like the platforms themselves, digital wallets can be hacked, and are subject to theft and fraud. As a result,

like other investors have, you can lose some or all of your holdings of Digital Assets.

- Unlike US banks and credit unions that provide certain guarantees of safety to depositors, there are no such safeguards provided to Digital Assets held in digital wallets by their providers or by regulators.

- Due to the anonymity Digital Assets offer, they have known use in illegal activity, including drug dealing, money laundering, human trafficking, sanction evasion and other forms of illegal commerce. Abuses could impact legitimate consumers and speculators; for instance, law enforcement agencies could shut down or restrict the use of platforms and exchanges, limiting or shutting off entirely the ability to use or trade Digital Asset products.

- Digital Assets may not have an established track record of credibility and trust. Further, any performance data relating to Digital Asset products may not be verifiable as pricing models are not uniform.

Investors should be aware of the potentially increased risks of transacting in Digital Assets relating to the risks and considerations, including fraud, theft, and lack of legitimacy, and other aspects and qualities of Digital Assets, before transacting in such assets.

**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.

**Rebalancing** does not protect against a loss in declining financial markets. There may be a potential tax implication with a rebalancing strategy. Investors should consult with their tax advisor before implementing such a strategy.

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.

**Artificial intelligence (AI)** is subject to limitations, and you should be aware that any output from an AI-supported tool or service made available by the Firm for your use is subject to such limitations, including but not limited to inaccuracy, incompleteness, or embedded bias. You should always verify the results of any AI-generated output.

To obtain **Tax-Management Services**, a client must complete the Tax-Management Form, and deliver the signed form to Morgan Stanley. For more information on Tax-Management Services, including its features and limitations, please ask your Financial Advisor for the Tax Management Form. Review the form carefully with your tax advisor. Tax-Management Services: (a) apply only to equity investments in separate account sleeves of client accounts; (b) are not available for all accounts or clients; and (c) may adversely impact account performance. Tax-management services do not constitute tax advice or a complete tax-sensitive investment management program. There is no guarantee that tax-management services will produce the desired tax results.

**When Morgan Stanley Smith Barney LLC, its affiliates and Morgan Stanley Financial Advisors and Private Wealth Advisors (collectively, "Morgan Stanley") provide "investment advice" regarding a retirement or welfare benefit plan account, an individual retirement account or a Coverdell education savings account ("Retirement Account"), Morgan Stanley is a "fiduciary" as those terms are defined under the Employee Retirement Income Security Act of 1974, as amended ("ERISA"), and/or the Internal Revenue Code of 1986 (the "Code"), as applicable. When Morgan Stanley provides investment education, takes orders on an unsolicited basis or otherwise does not provide "investment advice", Morgan Stanley will not be considered a "fiduciary" under ERISA and/or the Code. For more information regarding Morgan Stanley's role with respect to a Retirement Account, please visit [www.morganstanley.com/disclosures/dol](http://www.morganstanley.com/disclosures/dol). Tax laws are complex and subject to change. Morgan Stanley does not provide tax or legal advice. Individuals are encouraged to consult their tax and legal advisors (a) before establishing a Retirement Account, and (b) regarding any potential tax, ERISA and related consequences of any investments or other transactions made with respect to a Retirement Account. Individuals should consult their tax advisor for matters involving taxation and tax planning and their attorney for matters involving trust and estate planning, charitable giving, philanthropic planning and other legal matters.**

**Lifestyle Advisory Services:** Products and services are provided by third party service providers, not Morgan Stanley Smith Barney LLC ("Morgan Stanley"). Morgan Stanley may not receive a referral fee or have any input concerning such products or services. There may be additional service providers for comparative purposes. Please perform a thorough due diligence and make your own



independent decision.

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 be considered investment advice or a recommendation for either ERISA or Internal Revenue Code purposes and that (unless otherwise provided in a written agreement and/or as described at [www.morganstanley.com/disclosures/dol](http://www.morganstanley.com/disclosures/dol)) you remain solely responsible for your assets and all investment decisions with respect to your assets. Nevertheless, if Morgan Stanley or your Financial Advisor provides "investment advice," as that term is defined under Section 3(21) of ERISA, to you with respect to certain retirement, welfare benefit, or education savings account assets for a fee or other compensation, Morgan Stanley and/or your Financial Advisor will be providing such advice in its capacity as a fiduciary under ERISA and/or the Code. Morgan Stanley will only prepare a financial plan at your specific request using Morgan Stanley approved financial planning software.

The Morgan Stanley Goals-Planning System (GPS) includes a brokerage investment analysis tool. While securities held in a client's investment advisory account may be included in the analysis, the reports generated from the GPS Platform are not financial plans nor constitute a financial planning service. A financial plan generally seeks to address a wide spectrum of a client's long-term financial needs, and can include recommendations about insurance, savings, tax and estate planning, and investments, taking into consideration the client's goals and situation, including anticipated retirement or other employee benefits. Morgan Stanley Smith Barney LLC ("Morgan Stanley") will only prepare a financial plan at a client's specific request using Morgan Stanley approved financial planning software. Investing in financial instruments carries with it the possibility of losses and that a focus on above-market returns exposes the portfolio to above-average risk. Performance aspirations are not guaranteed and are subject to market conditions. High volatility investments may be subject to sudden and large falls in value, and there could be a large loss on realization which could be equal to the amount invested. **IMPORTANT:** The projections or other information provided by the Morgan Stanley Goals Planning System regarding the likelihood of various investment outcomes (including any assumed rates of return and income) are hypothetical in nature, do not reflect actual investment results, and are not guarantees of future results. Morgan Stanley does not represent or guarantee that the projected returns or income will or can be attained.

**A LifeView Financial Goal Analysis** ("Financial Goal Analysis") or LifeView Financial Plan ("Financial Plan") is based on the methodology, estimates, and assumptions, as described in your report, as well as personal data provided by you. It should be considered a working document that can assist you with your objectives. Morgan Stanley makes no guarantees as to future results or that an individual's investment objectives will be achieved. The responsibility for implementing, monitoring and adjusting your Financial Goal Analysis or Financial Plan rests with you. After your Financial Advisor delivers your report to you, if you so desire, your Financial Advisor can help you implement any part that you choose; however, you are not obligated to work with your Financial Advisor or Morgan Stanley.

**Important information about your relationship with your Financial Advisor and Morgan Stanley Smith Barney LLC when using LifeView Goal Analysis or LifeView Advisor.** When your Financial Advisor prepares and delivers a Financial Goal Analysis (i.e., when using LifeView Goal Analysis), they will be acting in a brokerage capacity. When your Financial Advisor prepares a Financial Plan (i.e., when using LifeView Advisor), they will be acting in an investment advisory capacity with respect to the delivery of your Financial Plan. This Investment Advisory relationship will begin with the delivery of the Financial Plan and ends thirty days later, during which time your Financial Advisor can review the Financial Plan with you. To understand the differences between brokerage and advisory relationships, you should consult your Financial Advisor, or review our "Understanding Your Brokerage and Investment Advisory Relationships," brochure available at <https://www.morganstanley.com/wealth-relationshipwithms/pdfs/understandingyourrelationship.pdf>

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 Financial Advisor or 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 Financial Advisor or Private Wealth Advisor, may vary by product and over time.

Investment and services offered through Morgan Stanley Smith Barney LLC, Member SIPC.

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

**HYPOTHETICAL MODEL PERFORMANCE (GROSS):** Hypothetical model performance results do not reflect the investment or performance of an actual portfolio following a GIC Strategy, but simply reflect actual historical performance of selected indices on a real-time basis over the specified period of time representing the GIC's strategic and tactical allocations as of the date of this report. The past performance shown here is simulated performance based on benchmark indices, not investment results from an actual portfolio or actual trading. There can be large differences between hypothetical and actual performance results achieved by a particular asset allocation or trading strategy. Hypothetical performance results do not represent actual trading and are generally designed

with the benefit of hindsight. Actual performance results of accounts vary due to, for example, market factors (such as liquidity) and client-specific factors (such as investment vehicle selection, timing of contributions and withdrawals, restrictions and rebalancing schedules). Clients would not necessarily have obtained the performance results shown here if they had invested in accordance with any GIC Asset Allocation Model for the periods indicated. Despite the limitations of hypothetical performance, these hypothetical performance results allow clients and Financial Advisors to obtain a sense of the risk/return trade-off of different asset allocation constructs. The hypothetical performance results in this report are calculated using the returns of benchmark indices for the asset classes, and not the returns of securities, fund or other investment products. Models may contain allocations to Hedge Funds, Private Equity and Private Real Estate. The benchmark indices for these asset classes are not issued on a daily basis. When calculating model performance on a day for which no benchmark index data is issued, we have assumed straight line growth between the index levels issued before and after that date.

**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](http://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.

**Environmental, Social and Governance (“ESG”) investments** in a portfolio may experience performance that is lower or higher than a portfolio not employing such practices. Portfolios with ESG restrictions and strategies as well as ESG investments may not be able to take advantage of the same opportunities or market trends as portfolios where ESG criteria is not applied. There are inconsistent ESG definitions and criteria within the industry, as well as multiple ESG ratings providers that provide ESG ratings of the same subject companies and/or securities that vary among the providers. Certain issuers of investments may have differing and inconsistent views concerning ESG criteria where the ESG claims made in offering documents or other literature may overstate ESG impact. ESG designations are as of the date of this material, and no assurance is provided that the underlying assets have maintained or will maintain and such designation or any stated ESG compliance. As a result, it is difficult to compare ESG investment products or to evaluate an ESG investment product in comparison to one that does not focus on ESG. Investors should also independently consider whether the ESG investment product meets their own ESG objectives or criteria. There is no assurance that an ESG investing strategy or techniques employed will be successful. Past performance is not a guarantee or a dependable measure of future results. 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 or sells 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.

**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.

Because of their narrow focus, **sector investments** tend to be more volatile than investments that diversify across many sectors and companies. **Technology stocks** may be especially volatile. Risks applicable to companies in the **energy and natural resources** sectors include commodity pricing risk, supply and demand risk, depletion risk and exploration risk. **Health care sector stocks** are subject to government regulation, as well as government approval of products and services, which can significantly impact price and availability, and which can also be significantly affected by rapid obsolescence and patent expirations. **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. 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.

The **indices** are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. The indices 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. Comparing an investment to a particular index may be of limited use.

**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.

This material is disseminated in the United States of America by Morgan Stanley Smith Barney LLC. Morgan Stanley Wealth Management is not acting as a municipal advisor to any municipal entity or obligated person within the meaning of Section 15B of the Securities Exchange Act (the "Municipal Advisor Rule") and the opinions or views contained herein are not intended to be, and do not constitute, advice within the meaning of the Municipal Advisor Rule.

This material, or any portion thereof, may not be reprinted, sold or redistributed without the written consent of Morgan Stanley Smith Barney LLC.

© 2025 Morgan Stanley Smith Barney LLC. Member SIPC.