



Connecting for good. Amplifying Impact.

2024 Annual Investment Meeting



Agenda

8:00 - 8:30 am Check-in, Light Breakfast

and Networking

8:30 - 10:00 am 2023 Capital Markets Review &

Performance

2024 Expectations

10:00 – 10:15 am Break

10:15 - 11:00 am Connecting for good:

Two Stories of Inspiration



A business of Morgan Stanley

Annual Investor Meeting 2024



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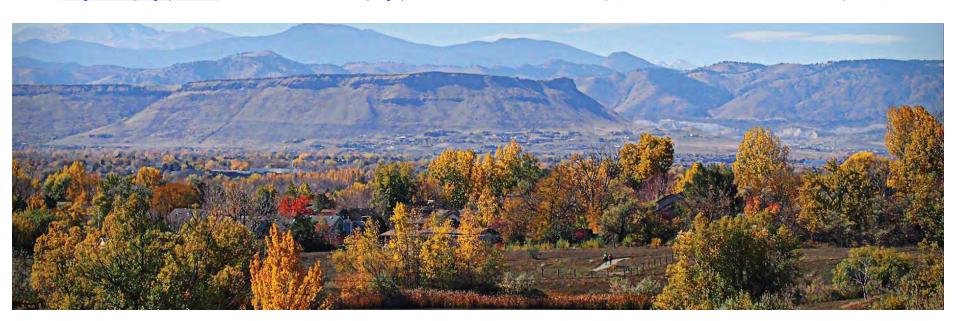
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Agenda: Today's Discussion

Section 1	Capital Markets Update	3 – 23
Section	Performance	24 – 35
Section 3	Disclosures	36 – 47

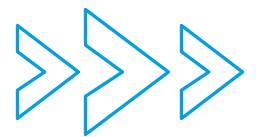
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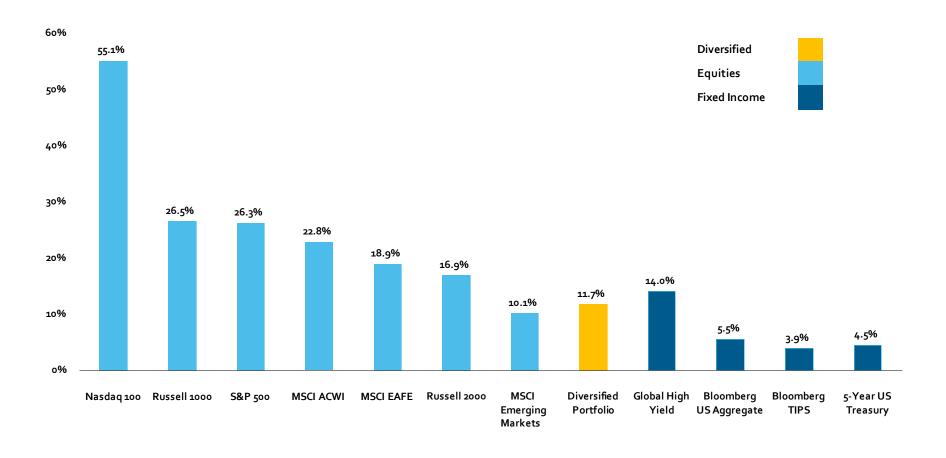


Capital Markets Update

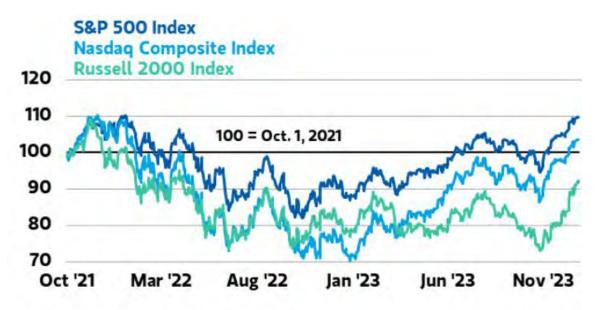


Total Returns for Select Asset Classes Year-to-Date 2023

Cumulative Return from December 30, 2022 - December 29, 2023



Source: FactSet, Bloomberg, Morgan Stanley Wealth Management Global Investment Office. 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.

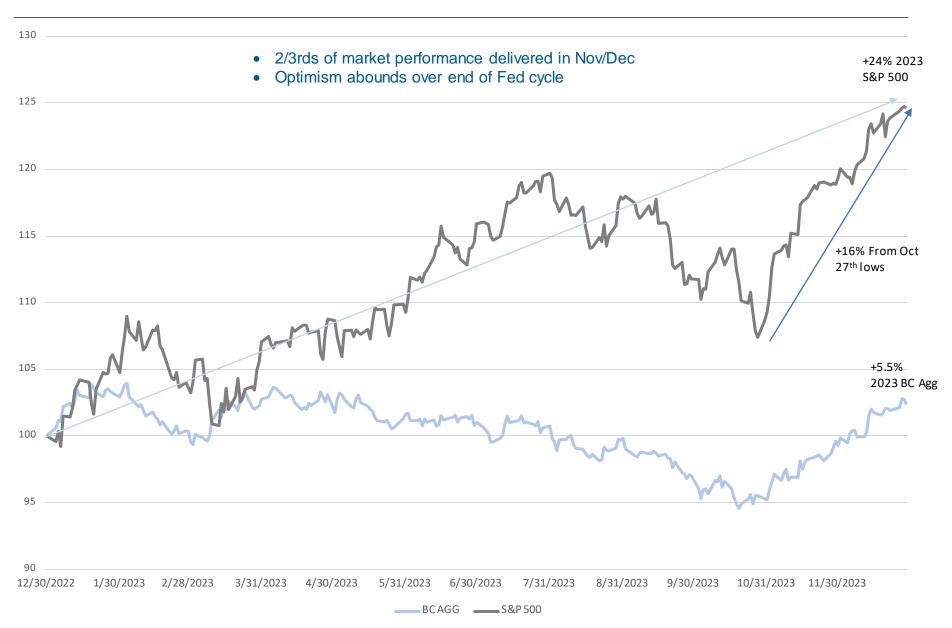


Source: Bloomberg as of Dec. 28, 2023

- As 2023 ended, US equities, as measured by the S&P 500 Index, are flirting with recovering their January 2022 high, erasing the bear market associated with the Federal Reserve's post-COVID hiking cycle.
- For the Nasdaq Composite and small-cap Russell 2000 indexes, respectively, 2021 all-time highs are approximately 6% and 16% away.
- With gains paced almost entirely by expanding multiples, and valuation multiples again flirting with 22 times current earnings, investors will have to contend with how to value a market now presumed to be midcycle, having nailed the soft landing. The bar has been set high for what constitutes an upside surprise in 2024, potentially limiting percentage gains for equity markets to modest single digits.

US Stock and Bond Market Performance 2023





2023 Has Delivered Major Positive Surprises



• GDP came in stronger



Source: Morgan Stanley Wealth Management GIC, Morgan Stanley Research as of Sept. 30, 2023

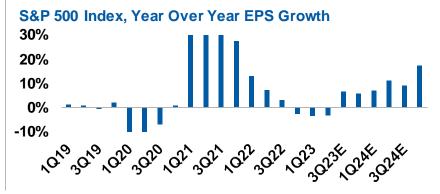


· Unemployment did not spike higher

• Real yield rose above inflation



Source: Morgan Stanley Wealth Management GIC, Bloomberg as of October 31, 2023



· EPS declined, but less than feared

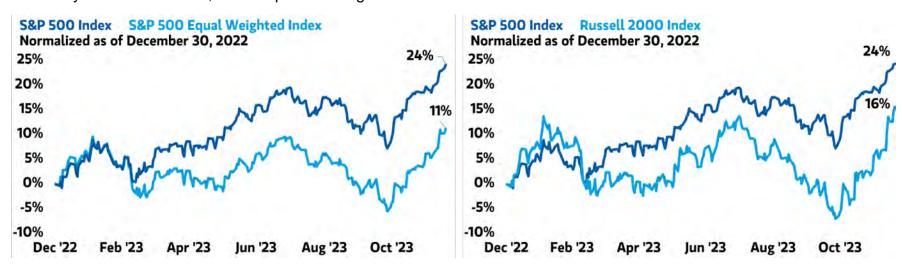
Source: Morgan Stanley Wealth Management GIC, Bloomberg as of November 30, 2023

Source: Morgan Stanley & Co. Research, Refinitiv as of November 30, 2023

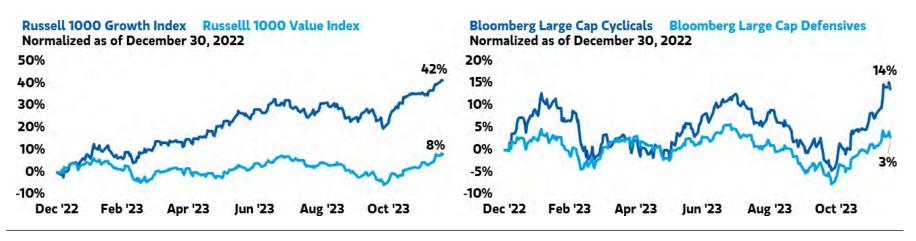
2023 End of Year Surprises



The S&P 500 Equal Weight Index rose from its 52-week low to 52-week high in the last month, as breadth improved materially. At the same time, small-caps have surged even faster in a show of rate relief.



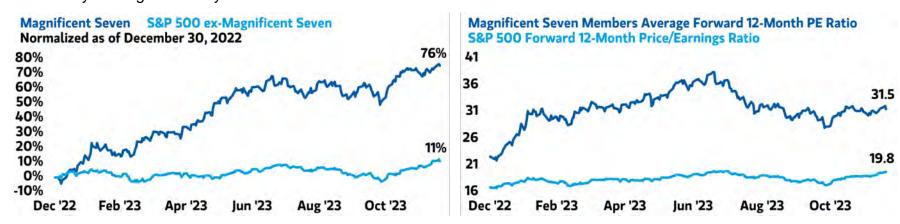
Growth significantly outperformed Value, which remained largely unchanged until November. Similarly, Defensives treaded water, while Cyclicals pushed higher.



2023 End of Year Surprises Continued



The seven largest companies by market cap weight (dubbed the "Magnificent Seven") have driven the S&P 500's performance in 2023, raising concerns of sustainability. Price-to-earnings multiples have spent most of the year between 30x and 35x for the group, while the S&P 500 overall remained at ~20x. That valuation gap (and higher betas for the top seven) suggest potential vulnerability if the growth story were to falter.



Despite an uptick in March amid the regional banking crisis, equity and bond volatilities have both dropped in 2023. Equity volatility moved significantly lower, reflecting investors' collective welcome of a potential soft landing and a dovish pivot from the Fed.





The 2023 Bear Market Retracement Impressive Mostly for the "Magnificent 7"

Magrillicerit 7

	Nasdaq Composi	te Index
S&P 500 Index, E		1 4 0004 400
"Magnificent Sev	ven"	June 1, 2021 = 100
140		135.9
130		
120	MA	109.6
110	WA A	109.6
100		
90		
80	"W" W	104.9
70 2021	2022	2023

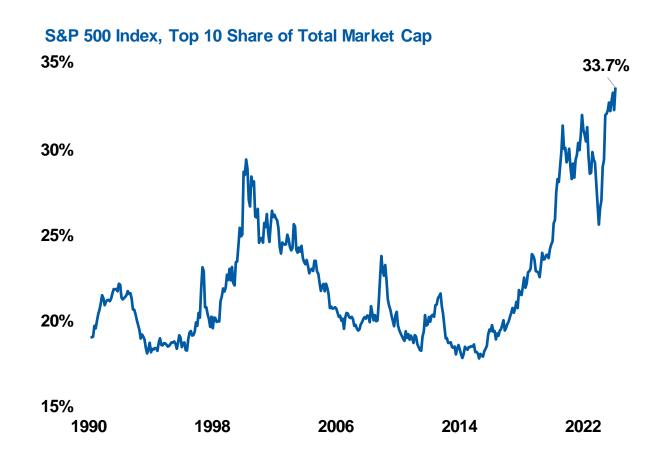
	S&P 500 Index, Cap- Weighted	Nasdaq Composite Index	S&P 500 Index, Equal- Weighted	"Magnificent Seven"
YTD Change in Price Index	19.9%	37.6%	6.2%	73.1%
Change in Earnings, Trailing 12 Months	-2.4%	-5.2%	-9.1%	20.5%
YTD Change in P/E Multiple	21.4%	29.9%	4.1%	44.7%

Source: Morgan Stanley Wealth Management GIC, Bloomberg as of December 8, 2023. "Magnificent 7" refers to Alphabet, Amazon, Apple, Meta Platforms, Microsoft, Nvidia, Tesla.

Source: Morgan Stanley Wealth Management GIC, Bloomberg as of December 8, 2023



Yielding Extreme Concentration and Risks for the Index



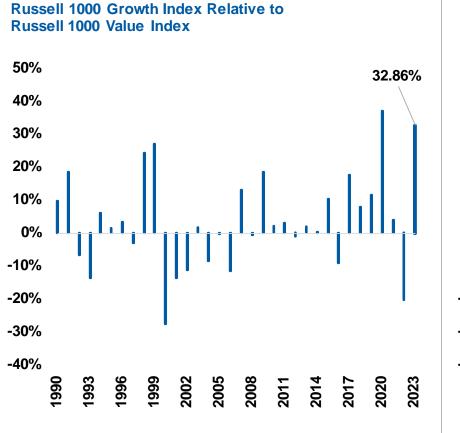
Magnificent Seven Concentration Risks

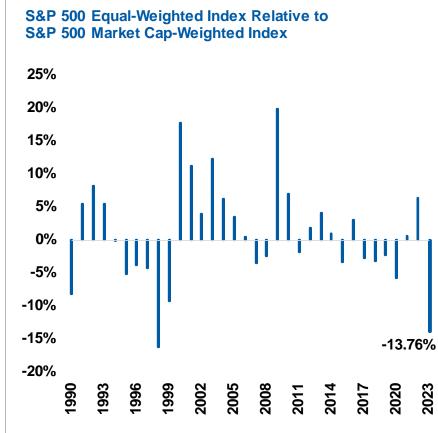
- Sector Risk
- Rate Risk
- Competitive Risk
- Factor Risk

Source: Morgan Stanley Wealth Management GIC, FactSet as of January 31, 2024



The Skewing of 2023 Performance Is Historically Extreme





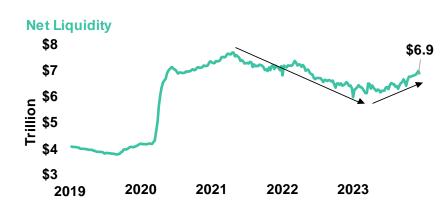
Source: Morgan Stanley Wealth Management GIC, Bloomberg as of December 8, 2023

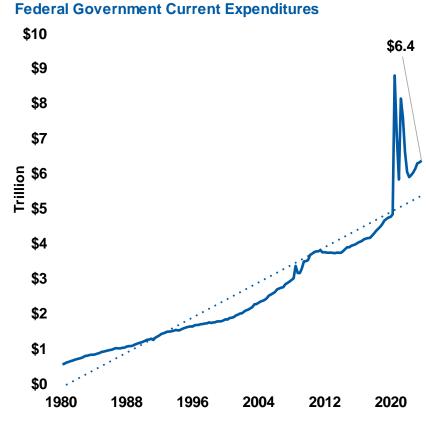
Source: Morgan Stanley Wealth Management GIC, Bloomberg as of December 8, 2023



Throughout 2023 Market Liquidity Has Improved





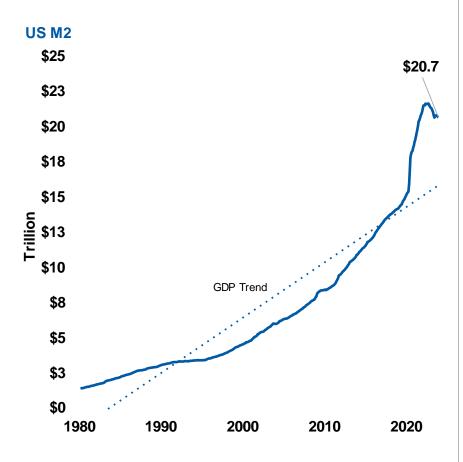


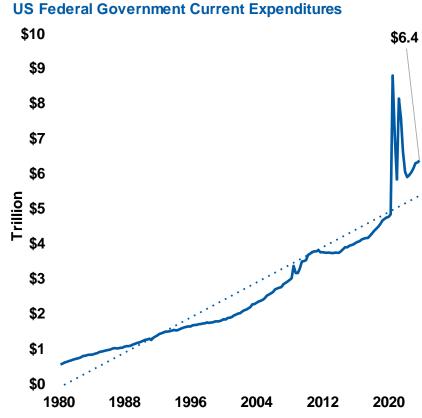
Source: Morgan Stanley & Co. Research, Bloomberg as of December 6, 2023

Source: Morgan Stanley Wealth Management GIC, St. Louis Federal Reserve as of July 1, 2023.



The Inflation Threat Comes From Excess Liquidity





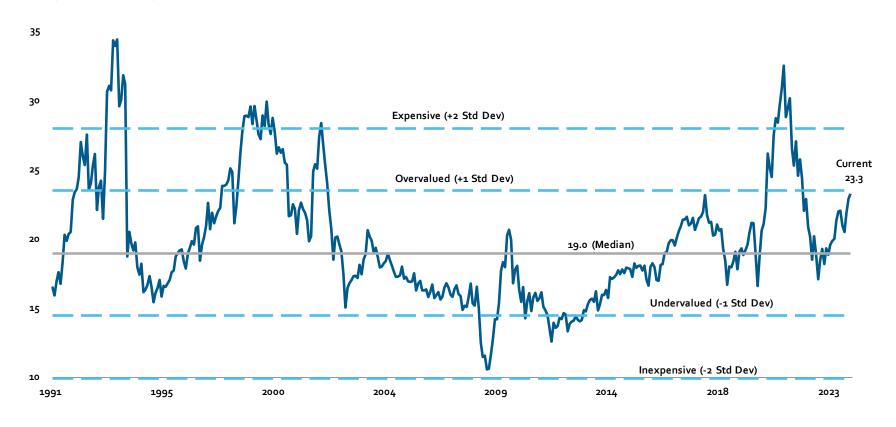
Source: Morgan Stanley Wealth Management GIC, Bloomberg as of October 31, 2023. M2 is a measure of the money supply that includes all elements of M1 as well as "near money." M1 includes cash and checking deposits, while near money refers to savings deposits, money market securities, mutual funds and other time deposits.

Source: Morgan Stanley Wealth Management GIC, St. Louis Federal Reserve as of July 1, 2023

S&P 500 Historical P/E Ratio

S&P 500 Trailing Price/Earnings Ratio with Historical Median

January 31, 1965, to January 31, 2024



Source: Bloomberg, Morgan Stanley Wealth Management GIO. Standard deviation (volatility) is a measure of the dispersion of a set of data from its mean.

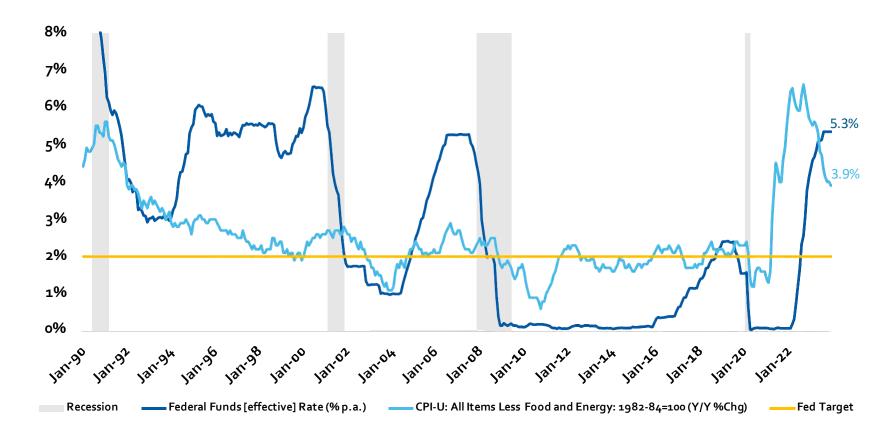
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Core CPI and the Federal Funds Rate

Look for Federal Funds Rate to Exceed Core CPI Inflation for the End to Tightening

As of December 31, 2023



Source: Haver Analytics, Morgan Stanley Wealth Management GIO



Federal Funds Rate Expectations

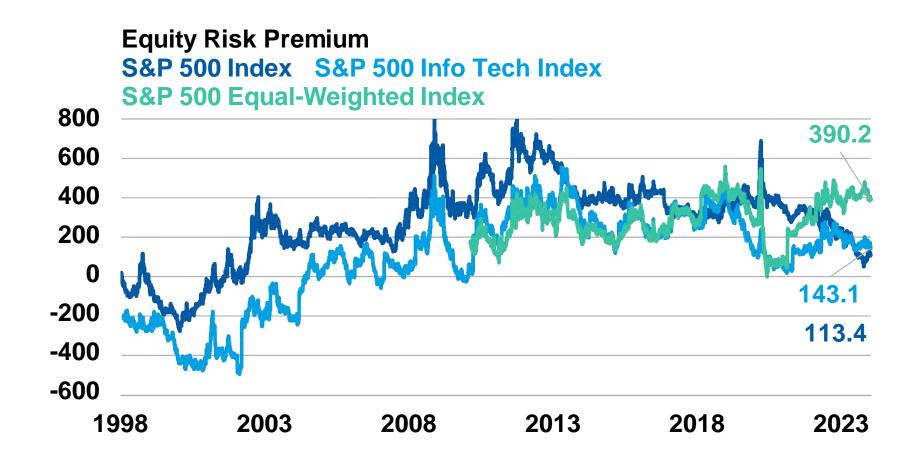
FOMC and Market Expectations for the federal funds rate

As of January 31, 2024





A Higher-For-Longer Fed Is Not Discounted in ERPs

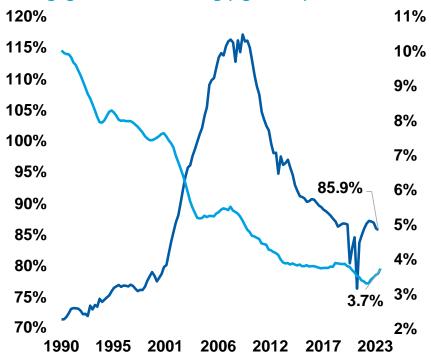


Source: Morgan Stanley Wealth Management GIC, Bloomberg as of January 12, 2024. Equity risk premium is the excess return that an individual stock or the overall stock market provides over a risk-free rate. The risk-free rate represents the interest an investor would expect from an absolutely risk-free investment over a specified period of time.

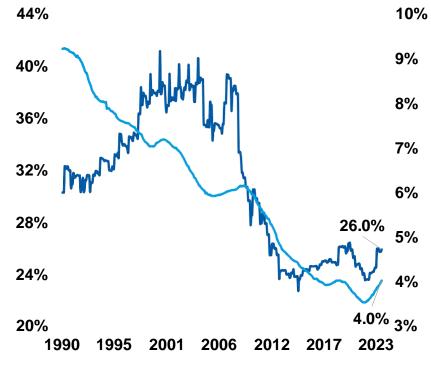


Economy Is Less Interest-Rate Sensitive as Households and Corporations Locked in Lower Interest Rates

US Household Debt As a Percentage of Personal Income (left axis) US Effective Rate of Interest on Mortgage Debt Outstanding (right axis)







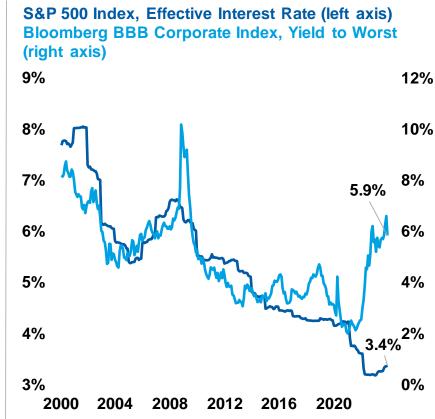
Source: Morgan Stanley Wealth Management GIC, Bloomberg as of September 30, 2023

Source: Morgan Stanley Wealth Management GIC, Bloomberg as of November 30, 2023



But Effective Rates Are Beginning to Rise; Refi Risk





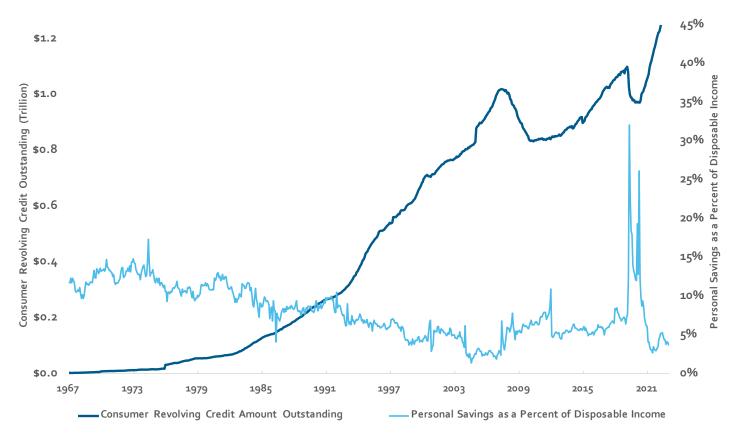
Source: Morgan Stanley Wealth Management GIC, Bloomberg as of November 30, 2023

Source: Morgan Stanley Wealth Management GIC, Bloomberg as of October 31, 2023



Consumer Revolving Credit Outstanding vs. Personal Savings

As of January 31, 2024



- Revolving credit card balances exceed the pre-pandemic peak.
- Savings has plummeted to its lowest level in 15 years.

Source: Bloomberg, Morgan Stanley Wealth Management Global Investment Office



What Happens to Earnings and Multiples From Here?

BULLISH CONSENSUS? S&P 50

S&P 500 Index, 12-Month Forward Price/Earnings Ratio

		16	17	18	19	20	21	22	23	24	25
	\$270	4,320	4,590	4,860	5,130	5,400	5,670	5,940	6,210	6,480	6,750
EPS	\$260	4,160	4,420	4,680	4,940	5,200	5,460	5,720	5,980	6,240	6,500
Month	\$250	4,000	4,250	4,500	4,750	5,000	5,250	5,500	5,750	6,000	6,250
velve l	\$240	3,840	4,080	4,320	4,560	4,800	5,040	5,280	5,520	5,760	6,000
ext Tv	\$230	3,680	3,910	4,140	4,370	4,600	4,830	5,060	5,290	5,520	5,750
dex, N	\$220	3,520	3,740	3,960	4,180	4,400	4,620	4,840	5,060	5,280	5,500
500 Index, Next Twelve Month	\$210	3,360	3,570	3,780	3,990	4,200	4,410	4,620	4,830	5,040	5,250
S&P	\$200	3,200	3,400	3,600	3,800	4,000	4,200	4,400	4,600	4,800	5,000

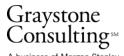
Source: Morgan Stanley Wealth Management GIC, Strategas as of December 13, 2023



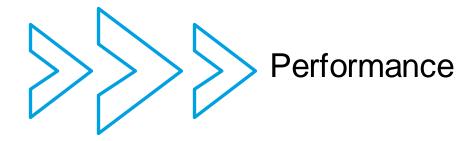
2024 Projections

2023 Year End Close: 4769

	Level	EPS	Implied P/E	Issued Date	Implied Performance
JPM	4200	225	18.67	11/29/2023	-11.9%
MS	4500	229	19.65	11/13/2023	-5.6%
UBS	4600	249	18.47	11/8/2023	-3.5%
Wells	4625	235	19.68	11/27/2023	-3.0%
GS	5100	237	21.52	12/17/2023 *Raised fro	om 4700 6.9%
Soc Gen	4750	230	20.65	11/20/2023	-0.4%
Barclays	4800	233	20.60	11/28/2023	0.7%
BofA	5000	235	21.28	11/21/2023	4.8%
RBC	5000	232	21.55	11/22/2023	4.8%
DB	5100	250	20.40	11/27/2023	6.9%



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Long Term Portfolio

Fund Overview

Fund Assets Under Management \$79.64m

Annual Investment Management Costs* 0.29%

Description

The Long Term Portfolio's objective is to maximize capital appreciation and income while maintaining purchasing power and maximizing excess investment returns over inflation.

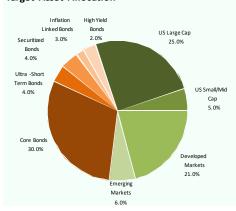
About Performance

*The investment results depicted herein represent historical Net performance after the deduction of investment manager and portfolio implementation costs.

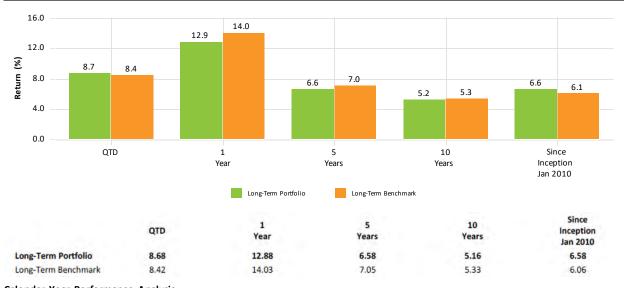
Annual, cumulative and annualized total returns are calculated assuming reinvestment of dividends and income plus capital appreciation. Performance for periods greater than one year is annualized. The performance data presented has been prepared by the fund or its sponsor.

Past performance is not a guarantee of future results.

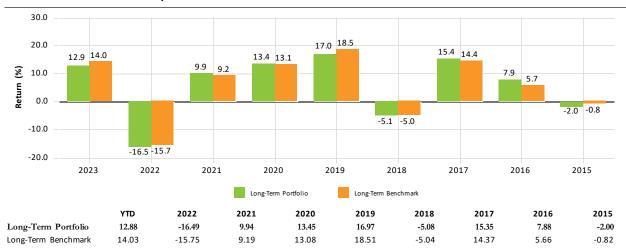
Target Asset Allocation



Multi-Period Performance Analysis



Calendar Year Performance Analysis



Colorado Gives Foundation: Long-Term Fund

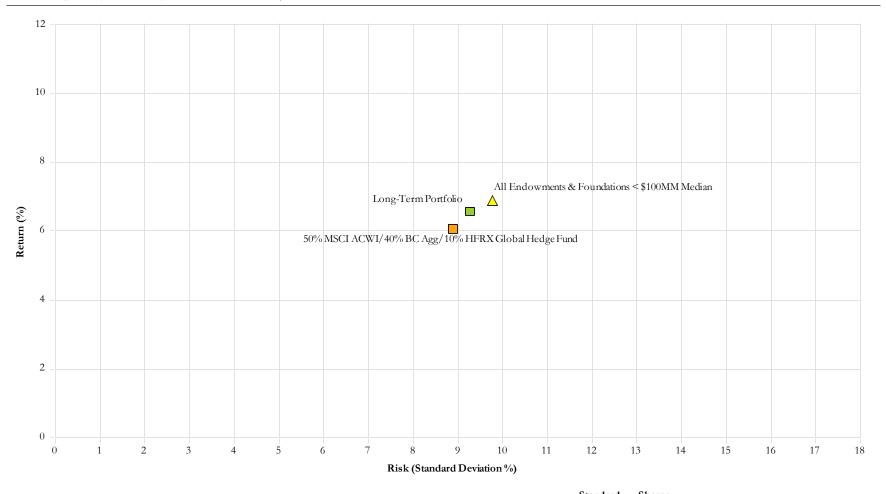


	YEAR ENDED DECEMBER 31, 2023									
Asset Class / Manager	Benchmark	Benchmark Allocation	Average Allocation	Benchmark Index Return	CGF Asset Class Return	Benchmark Attribution Return		Manager Selection Effect	Interaction Effect	Portfolio Attribution
Equities	MSCI ACWI	55.0%	50.0%	22.20%	20.63%	12.21%	-0.32%	-0.76%	0.17%	10.27%
Fixed Income	Bloombergs Barclays US Agg 1-3 Yr	45.0%	50.0%	5.53%	5.33%	2.49%	-0.33%	-0.01%	0.09%	2.62%
Cash	90-Day Treasury Bill	0.0%	0.0%	5.26%	0.45%	0.00%	0.00%	0.00%	0.00%	0.00%
Attribution Totals		100.0%	100.0%			14.03%	-0.64%	-0.77%	0.26%	12.88%

ASSETCLASS	BENCHMARK	PORTFOLIO	UNDERWEIGHT	NEUTRAL	OVERWEIGHT		BENCHMAR	rK	POR	TFOLIO
Cash	-	0.0%		•	0.2		22.101	•••		02.0
Equities	50.0%	51.6%			-		10%	0%	0% —	0%
US Large Cap	30.5%	29.0%				_				
US SMID Cap	0.8%	2.8%							48%	5
International	13.4%	13.7%				40%		50%		
Emerging Market	5.3%	6.1%								
Fixed Income	40.0%	48.4%			•		Cash	■ Equities ■ Fixed	ncome Alterr	-11-11
Investment Grade FI	40.0%	48.4%				_	■ Casn	Equities Fixed	ncome Alterr	atives
Non-US Fixed Income	-	-					A	CTIVE/PASSIVE ALLOC	ATION	
Sub-Investment Grade FI	-	-						Passive	Active	
Tax Exempt Fixed Income	-	-								
Alternatives	10.0%	-	•			3	3%		67%	
Real Assets	-	-				_ '				
Hedged Strategies	10.0%	-				Active				67%
Private Investments	-	-				Passive				33%
						Total				100%

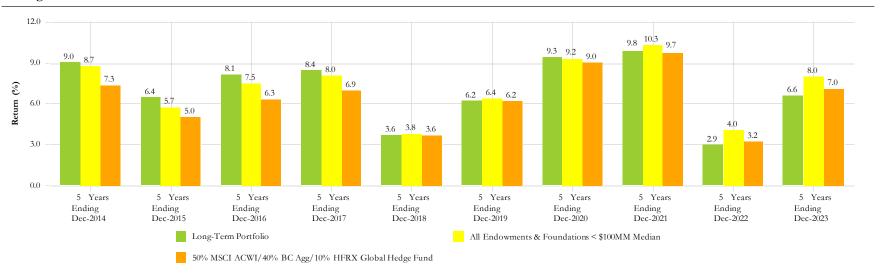
Long Term Fund (Nonprofit Endowments)

Since Inception (01/01/2010) Risk / Return Analysis



	Return	Standard Deviation	Sharpe Ratio
Long-Term Portfolio	6.58	9.29	0.64
50% MSCI ACWI/40% BC Agg/10% HFRX Global Hedge Fund	6.06	8.91	0.60
All Endowments & Foundations < \$100MM Median	6.88	9.80	0.65

Rolling 5 Year Returns vs Peer Universe



Growth of \$100 Since January 2010



Colorado Gives Foundation ESG / Impact Objectives

PORTFOLIO PREFERENCES

PORTFOLIO INTEGRATION APPROACH

• Title Portfolio toward specific themes or objectives

AVAILABLE INVESTMENT OPPORTUNITIES

 Public market investments (e.g., Public Equities, Income, Multi-Asset)

APPROACHES TO INVESTING WITH IMPACT

- Restriction Screening
- ESG Integration
- Thematic Solutions
- Shareholder engagement

IMPACT PREFERENCES

IMPACT OBJECTIVES

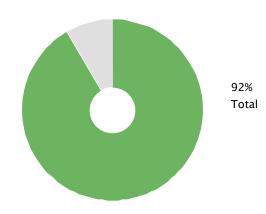
Improving Lives

- Access to Education
- Access to Finance
- Access to Food & Nutrition
- Access to Healthcare
- Access to Information
- Affordable Housing

CUSTOMIZED IMPACT OBJECTIVES

- Climate Solutions
- Environmental Practices
- Governance Practices
- Social Practices

PORTFOLIO ACTIVATION



Short Term Portfolio

Fund Overview

Fund Assets Under Management \$11.61m

Annual Investment Management Costs* 0.21%

Description

The Short Term Portfolio's objective is to preserve capital, maintain purchasing power, and generate investment returns while carrying out the mission of the Foundation.

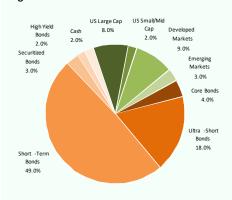
About Performance

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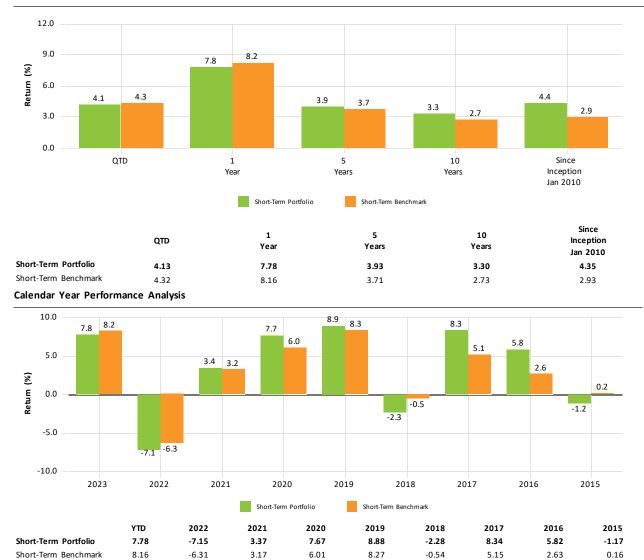
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Past performance is not a guarantee of future results.

Target Asset Allocation



Multi-Period Performance Analysis



^{*}Short-term benchmark consist of: 20% MSCI All Country World Index, 75% Bloomberg Barclays US Aggregate Index, and 5% 90-day Treasury Bill.

Colorado Gives Foundation: Short-Term Fund

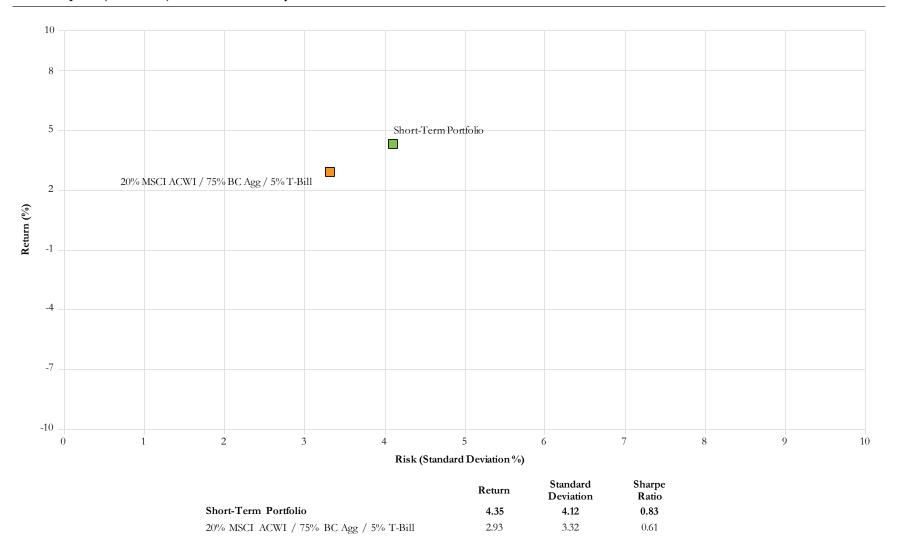


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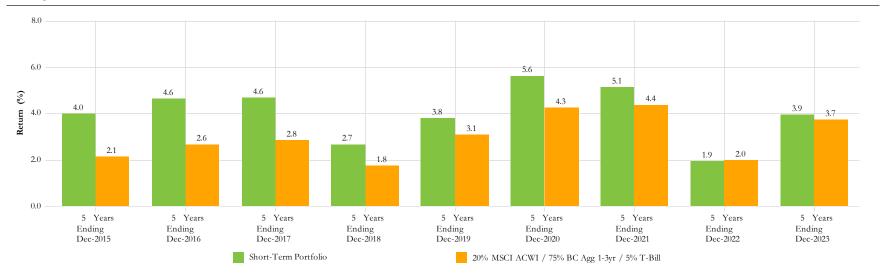
Asset Class / Manager	Benchmark	Benchmark Allocation	Average Allocation	Benchmark Index Return	CGF Asset Class Return	Benchmark Attribution Return		Manager Selection Effect	Interaction Effect	Portfolio Attribution
Equities	MSCI ACWI	20.0%	15.0%	22.20%	21.99%	4.44%	-0.63%	0.02%	0.07%	3.24%
Fixed Income	Bloombergs Barclays US Agg 1-3 Yr	75.0%	85.0%	5.53%	5.41%	4.15%	-0.20%	-0.03%	0.05%	4.54%
Cash	90-Day Treasury Bill	5.0%	0.0%	5.26%	1.69%	0.26%	0.22%	-0.11%	0.24%	0.00%
Attribution Totals		100.0%	100.0%			8.16%	-0.62%	-0.12%	0.36%	7.78%

			PORTFOLIO POSITIO	ONING VS. POLICY	BENCHMARK			
ASSETCLASS	BENCHMARK	PORTFOLIO	UNDERWEIGHT	NEUTRAL	OVERWEIGHT	BENO	HMARK	PORTFOLIO
Cash	5.0%	-	•					00/
Equities	0.0%	1 .1%				0%	5%	0% 0% 19
US Large Cap	12.2%	10.9%				-	20%	
US SMID Cap	0.3%	1.1%				75%		81%
International	5.3%	5.0%						
Emerging Market	2.1%	2.3%				■ Cas	h ∎Equities ∎Fix	ed Income Alternatives
Fixed Income	75.0%	80. %					ACTIVE/PASSIVE ALI	LOCATION
Investment Grade FI	75.0%	77.9%				-	Passive	Active
Non-US Fixed Income	-	-				18%		8 %
Sub-Investment Grade FI	-	3.0%						
Tax Exempt Fixed Income	-	-						
Alternatives	-	-				Active		82%
Real Assets	-	-				Passive Total		18% 100%
Hedged Strategies	-	-				Iotai		100 /6
Private Investments	-	-						

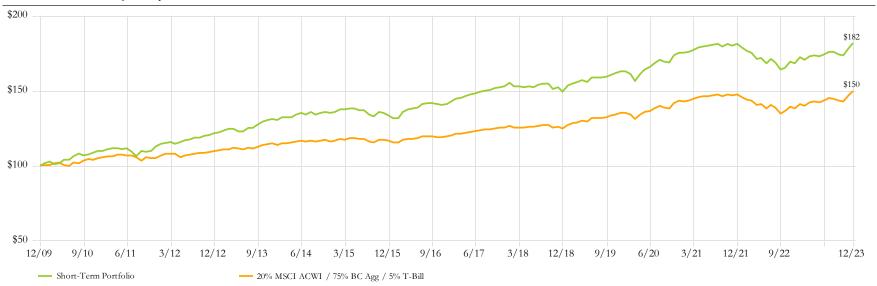
Since Inception (01/01/2010) Risk / Return Analysis



Rolling 5 Year Returns vs Benchmark



Growth of \$100 Since January 2010





Long Term Portfolio – Decisions Review

Over the previous 4 years MS Graystone as OCIO to the Foundation dynamically adjusts both portfolio asset allocation and manager selection in attempt to improve return outcomes and minimize investment risk within the context of CFF's investment policy



Outlook and Positioning

EQUITIES

US Equity

- Uncertainty remains that forward earnings estimates are accurately discounting the most recent developments of a strong US dollar, rising oil prices, maturing US fiscal stimulus and an increasingly tapped-out US consumer.
- Additionally, we expect that Fed actions in 2024 may result in a "higher-for-longer" rate scenario. Our preference is for defensive and secular-growth equities with quality balance sheets
- Seek to utilize market w eakness to close remaining underweight positioning.
- Watching for a broadening out of performance away from the magnificent 7 as an indicator to add to equity

International Developed

- The mix of high and sticky inflation, existential risks associated with Russia/Ukraine and the European Central Bank's position that it has limited tools to help suggest that the odds of recession are over 50%.

Emerging Markets

- Recent softness in China, including macro uncertainty and deflationary pressures, along with growing opacity around policy direction, have caused concern for the country's growth path.

FIXED INCOME

- Attractive risk reward compared to other asset classes, as monetary easing drives yields down from decade highs and credit spreads remain cheap
- Preference for high quality Fixed Income, Investment Grade>Mortgage-Backed Securities>Leveraged Loans>High Yield.
- A soft landing for the economy, peak in policy rates, attractive all-in yields and progress on managing near-termmaturities make the case for credit to remain resilient

	Q4 2024 Forecast		
	Bear	Base	Bull
Equities			
5&P 500	3,850	4,500	5,050
MSCI Europe	1,625	1,970	2,240
Topix	1,850	2,400	2,600
MSCI EM	750	1,050	1,140
Rates (%)			
US Treasury 10-Year	5.05	3.95	2.50
German Bund 10-Year	2.70	1.80	1.50
UK Gilt 10-Year	4.60	3.50	3.00
Japanese Govt. Bond 10-Year	1.80	0.90	0.35
Credit Spreads (bps)			
US Investment Grade	165	125	90
US Hìgh Yield	600	475	325
US Leveraged Loans	675	525	400
EUR Investment Grade	225	160	120
EUR High Yield	675	525	400
Commodities			
Brent Crude Oil (spot)	60	75	95

Source: Bloomberg, FactSet, Morgan Stanley & Co., Morgan Stanley Wealth Management GIC, The Yield Book® Software and Services. © 2022 FTSE Index LLC. All rights reserved.

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.





Q & A







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San Luis Valley Local Foods Coalition



The Action Center



Get Help v

Donate

Get Involved

Events

Who We Are v

Contact Us

Accessibility Tools









The Action Center



Get Help v

Donate

Get Involved

Events

Who We Are v

Contact Us

Accessibility Tools





How We Support Our Endowment Partners

- Internal Coaching and Consulting Resources
- Fund Options and Value-Aligned Investing
- Continued Educational Opportunities and Events
- Three Grants to Help Start or Grow Endowed Funds

Building Futures Together with Endowment Grants

Start a New Endowment	Grow Your Endowment	Amplify Your Endowment or Start Another
For new endowment partners. Minimum to open fund is \$50,000. One-time, 10% match up to \$250,000.	 For existing endowment partners. For funds with a balance less than \$100,000. Minimum contribution for match is \$10,000. 10% match is up to \$100,000 per year. Application required. 	 For existing endowment partners. Designed to support endowment building initiatives or comprehensive campaigns. For funds with a balance over \$100,000. Minimum contribution for match is \$50,000. 10% match is up to \$100,000 per year. Application required.

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Nonprofit Endowment Manager











Thank you!



Disclosures



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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.

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Global Investment Manager Analysis (GIMA) Focus List, Approved List and Tactical Opportunities List; Watch Policy. GIMA uses two methods to evaluate investment products in applicable advisory programs: Focus (and investment products meeting this standard are described as being on the Approved (and 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 concems. 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 refected in the GIC Asset Allocation Models which, when compounded over a period of years, would decrease returns.

Adverse Active Alpha SM 2.0 is a patented screening and scoring process designed to help identify high-quality equity and fxed 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 beneft of hindsight. In addition, highly ranked managers can have differing risk profles 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 profles 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 beneft 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 Efciency 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 afliates. U.S. Pat. No. 8,756,098 applies to the Adverse Active Alpha system and/or methodology.

Additionally, highly ranked managers can have difering risk profles 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 afliates. 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 afliates, 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 of set) 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 refected 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.

Morgan Stanley or Executing Sub-Managers, as applicable, in some of Morgan Stanley's Separately Managed Account ("SMA") programs may efect transactions through broker-dealers other than Morgan Stanley or our afliates. In such instances, you may be assessed additional costs by the other frm 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 confrmations or account statements. Certain Sub-Managers have historically directed most, if not all, of their trades to outside frms. Information provided by Sub-Managers concerning trade execution away from Morgan Stanley is summarized at: www.morganstanley.com/wealth/investmentsolutions/pdfs/adv/sotresponse.pdf. For more information on trading and costs, please refer to the ADV Brochure for your program(s), available at www.morganstanley.com/wealth/investmentsolutions/pdfs/adv/sotresponse.pdf. Private Wealth Advisor.

Conficts 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 conficts 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 afliates. Such persons may have an ongoing business relationship with certain investment managers or mutual fund companies whereby they, Morgan Stanley Wealth



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Morgan Stanley charges each fund family we ofer 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 ofer 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 profle. 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.

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

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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 difer 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 ofered 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 dient redemptions. This difering liquidity profle 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 ofset 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. Please read it carefully before investing.

Money Market Funds: You could lose money in money market funds. Although money market funds classifed 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 fuctuate 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 diversifed portfolio. Investors may beneft 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 ofered 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 magnifed 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 fxed income securities will fuctuate 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 Infation Protection Securities' (TIPS) coupon payments and underlying principal are automatically increased to compensate for infation by tracking the consumer price index (CPI). While the real rate of return is guaranteed, TI



Treasuries in times of low infation. There is no guarantee that investors will receive par if TIPS are sold prior to maturity. The returns on a portfolio consisting primarily of environmental, social, and governance-aware investments ("ESG") may be lower or higher than a portfolio that is more diversified or where decisions are based solely on investment considerations. Because ESG criteria exclude some investments, investors may not be able to take advantage of the same opportunities or market trends as investors that do not use such criteria. The companies identified and investment examples are for illustrative purposes only and should not be deemed a recommendation to purchase, hold or sell any securities or investment products. They are intended to demonstrate the approaches taken by managers who focus on ESG criteria in their investment strategy. There can be no guarantee that a client's account will be managed as described herein. Options and margin trading involve substantial risk and are not appropriate for all investors. Besides the general investment risk of holding securities that may decline in value and the possible loss of principal invested, closed-end funds may have additional risks related to declining market prices relative to net asset values (NAVs), active manager underperformance and potential leverage. Closed-end funds, unlike open-end funds, are not continuously ofered. There is a one-time public ofering 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 ofering. 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 t

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) Conficts 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 may be either traditional alternative investment vehicles, such as hedge funds, fund of hedge funds, private real estate and managed futures or, non-traditional products such as mutual funds and exchange-traded funds that also seek alternative-like exposure but have significant differences from traditional alternative investments. 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; and Risks associated with the operations, personnel, and processes of the manager. Further, opinions regarding Alternative Investments expressed herein may difer from the opinions expressed by Morgan Stanley Wealth Management and/or other businesses/afliates of Morgan Stanley Wealth Management.

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 difer materially from those refected or contemplated in such forward-looking statements. Clients should carefully consider the investment objectives, risks, charges, and expenses of a fund before investing.

Alternative investments involve complex tax structures, tax inefcient investing, and delays in distributing important tax information. Individual funds have specific risks related to their investment programs that will vary from fund to fund. Clients should consult their own tax and legal advisors as Morgan Stanley Wealth Management does not provide tax or legal advice.

Interests in alternative investment products are ofered pursuant to the terms of the applicable ofering memorandum, are distributed by Morgan Stanley Smith Bamey LLC and certain of its afliates, and (1) are not FDIC-insured, (2) are not deposits or other obligations of Morgan Stanley or any of its afliates, (3) are not guaranteed by Morgan Stanley and its afliates, and (4) involve investment risks, including possible loss of principal. Morgan Stanley Smith Bamey LLC is a registered broker-dealer, not a bank.

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 confict of interest in ofering alternative investments because Morgan Stanley Wealth Management or our afliates, 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 ofer complete transparency as to membership and construction methodology. As such, some believe that hedge fund index returns have certain biases that are not present intraditional indexes. Some of these biases infate 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 infated 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 afect 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 diffcult to quantify the efects 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 qualifed 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-inefcient 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 ofset 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 fuctuations 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 meaninged to meet the investor's goals by the pre-established year or "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, ha

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 beneft 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 identifed 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 ofer, they have known use in illegal activity, including drug dealing, money laundering, human tracking, 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 of 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 verifable 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.
- The exchange rate of virtual currency products versus the USD historically has been very volatile and the exchange rate could drastically decline. For example, the exchange rate of certain Digital



Assets versus the USD has in the past dropped more than 50% in a single day. Other Digital Assets may be afected by such volatility as well.

- Digital Asset exchanges have limited operating and performance histories and are not regulated with the same controls or customer protections available to more traditional exchanges transacting equity, debt, and other assets and securities. There is no assurance that a person/exchange who currently accepts a Digital Asset as payment will continue to do so in the future.
- The regulatory framework of Digital Assets is evolving, and in some cases is uncertain, and Digital Assets themselves may not be governed and protected by applicable securities regulators and securities laws, including, but not limited to, Securities Investor Protection Corporation coverage, or other regulatory regimes.
- Morgan Stanley Smith Barney LLC or its afliates (collectively, "Morgan Stanley") may currently, or in the future, ofer or invest in Digital Asset products, services or platforms. The proprietary interests of Morgan Stanley may confict with your interests.
- The foregoing list of considerations and risks are not and do not purport to be a complete enumeration or explanation of the risks involved in an investment in any product or fund investing or trading in Digital 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 refect the actual investment strategy or objective of a particular investment. Consequently, comparing an investment to a particular index may be of limited use.

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 quarantee that tax-management services will produce the desired tax results.

When Morgan Stanley Smith Barney LLC, its afliates and Morgan Stanley Financial Advisors and Private Wealth Advisors (collectively, "Morgan Stanley") provide "investment advice" regarding a retirement or welfare beneft plan account, an individual retirement account or a Coverdell education savings account ("Retirement Account"), Morgan Stanley is a "fduciary" 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 "fduciary" 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/disdosures/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.

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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 fduciary 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) 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 beneft, 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 fduciary under ERISA and/or the Code. Morgan Stanley will only prepare a fnancial plan at your specific request using Morgan Stanley approved fnancial planning software.

The Morgan Stanley Goals-Planning System (GPS) includes a brokerage investment analysis tool. While securities held in a client's investment advisory accounts 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 benefts. 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 infinancial 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 refect 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 Life View Financial Goal Analysis ("Financial Goal Analysis") or Life View 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 a bout 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 fduciary 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 conficts 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 overtime.

Investment and services of ered 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 refect the investment or performance of an actual portfolio following a GIC Strategy, but simply refect actual historical performance of selected indices on a real-time basis over the specifed 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 beneft of hindsight. Actual performance results of accounts vary due to, for example, market factors (such as liquidity) and client-specifc 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-of of diferent 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 refected in the GIC Asset Allocation Models. The GIC Asset Allocation Models and any model performance included in this presentation are intended as educational materials. Were a client to use these models in connection with investing, any investment decisions made would be subject to transaction and other costs which, when compounded over a period of years, would decrease returns. Information regarding Morgan Stanley's standard advisory fees is available in the Form ADV Part 2, which is available at www.morganstanley.com/adv. The following hypothetical illustrates the compound efect 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 fve-year return would be 101.1% and the fve-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 fuctuations, investment risk, and possible loss of principal. All guarantees, including optional benefts, 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 specifc 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 benefts 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 beneft and cash surrender value.

Equity securities may fuctuate in response to news on companies, industries, market conditions and general economic environment. **Ultrashort-term fxed income** asset class is comprised of fxed 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 benefts 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 refected in the daily NAV, and, as a result, the MLP fund's after-tax performance could difer significantly from the underlying assets even if the pre-tax performance is closely tracked.

Investing in commodities entails significant risks. Commodity prices may be afected 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 fuctuate and may appreciate or decline, depending on market conditions. Unlike bonds and stocks, precious metals do not make interest or dividend payments. Therefore, precious metals may not be appropriate for investors who require current income. Precious metals are commodities that should be safely stored, which may impose additional costs on the investor.

REITs investing risks are similar to those associated with direct investments in real estate: property value fuctuations, 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 afect 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, quantifes the efect 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 foating-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 foating 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 foating-rate securities may be subject to call risk. The market value of convertible bonds and the underlying common stock(s) will fuctuate 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 afect yield. Some \$25 or \$1000 par preferred securities are QDI (Qualifed Dividend Income) eligible. Information on QDI eligiblity is obtained from third party sources. Th

Companies paying dividends can reduce or cut payouts at any time.

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

Growth investing does not guarantee a proft 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 proft 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 proft and does not protect against loss in declining markets. Since such a plan involves continuous investment in securities regardless of fuctuating price levels of such securities, the investor should consider his financial ability to continue his purchases through periods of low price levels.

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