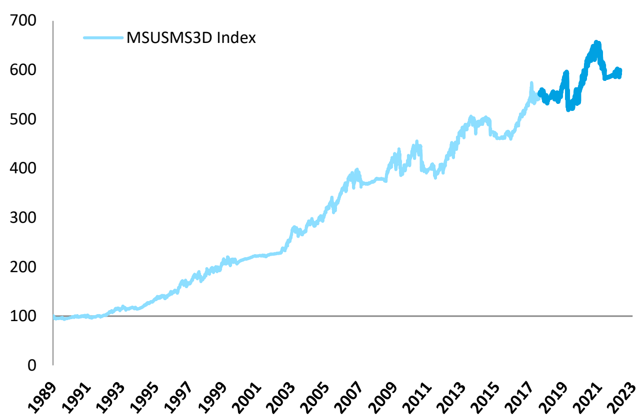
Morgan Stanley

Morgan Stanley 3D Index

Index Performance, Simulated and Actual*



Source: Morgan Stanley, Bloomberg

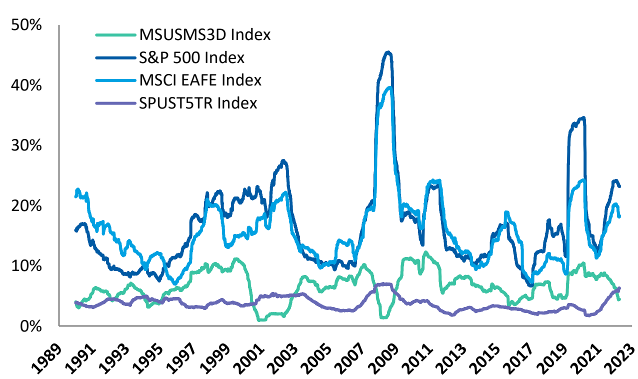
Summary Statistics, Simulated and Actual*

	MSUSMS3D Index	S&P 500 Index	MSCI EAFE Index	SPUST5TR Index
YTD Return	2.04%	7.03%	7.65%	2.24%
Return Since Index Live Date**	1.80%	8.37%	1.21%	0.73%
1-Year Ann. Return	-2.17%	-9.29%	-4.08%	-1.88%
3-Year Ann. Return	4.11%	16.71%	10.30%	-2.92%
5-Year Ann. Return	2.24%	9.23%	0.89%	0.68%
10-Year Ann. Return	3.37%	10.09%	2.25%	0.59%
10-Year Ann. Volatility	6.80%	17.71%	14.74%	3.36%
10-Year Sharpe Ratio	0.50	0.57	0.15	0.17
Full Period Ann. Return	5.53%	7.65%	2.10%	4.84%
Full Period Max. Drawdown	17%	57%	62%	14%
Correlation to MS3D Index	100%	62%	55%	1%

Source: Morgan Stanley, Bloomberg

** Actual Return if less than 1yr since Index Live Date; if not, Annualized Return is used

1-Year Rolling Volatility*



Source: Morgan Stanley, Bloomberg

* From December 29, 1989 to March 31, 2023.
The Index Live Date is July 18, 2018.
All data prior to that are simulated.

INDEX IDENTIFIER (TICKER):
MSUSMS3D

WEBSITE:
morganstanley.com/indices/ms3d

INDEX CALCULATION AGENT:
Morgan Stanley & Co. LLC

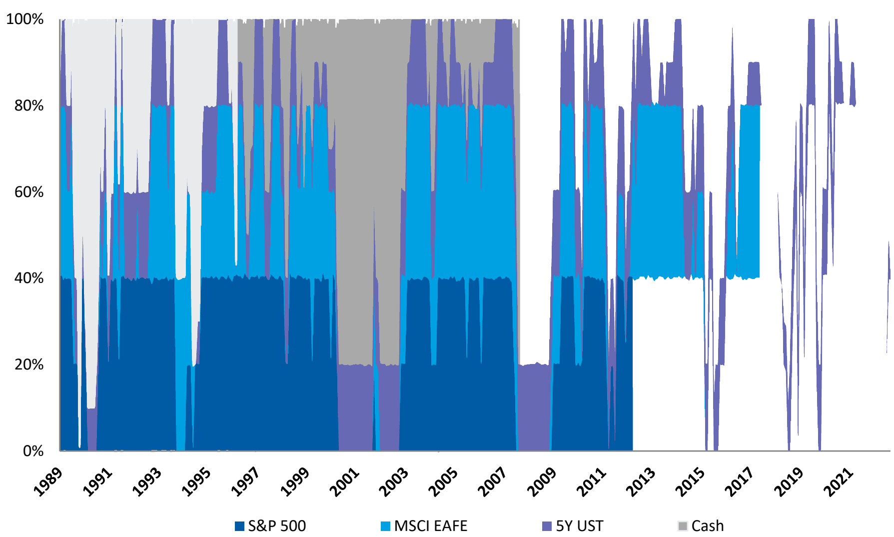
INDEX LIVE DATE:
July 18, 2018

NUMBER OF INDEX COMPONENTS:
Maximum 4

REBALANCE FREQUENCY:
Monthly

Please see Note on Simulated Returns, page 4

1-Month Rolling Index Composition*



Monthly Allocations*

Asset Class	Maximum Allocation	Monthly Average Allocations[1] February 2023	Monthly Average Allocations[1] March 2023	Cumulative Return Attributions[2] March 2023
Domestic Equities				
S&P 500 Index	40%	18%	20%	0.71%
Global Developed Equities				
MSCI EAFE Index	40%	20%	20%	0.38%
Domestic Bonds				
5-Year US Treasury Notes	20%	9%	1%	-0.04%
Cash				
1-Month US Treasury Bills	100%	55%	59%	0.08%

* As of March 31, 2023. The Index Live Date is July 18, 2018. All data prior to that are simulated.
[1] Computed as the average of the daily allocations over the corresponding month.
[2] The sum of the daily index components' return attribution is not equal to the Index return over that month due to the return compounding effects.

Index Overview

- Combines core asset classes and dynamic market indicators to attempt to participate in growth opportunities through high equity exposure, while reducing performance swings.
- The Index seeks to provide access to diversified global opportunities by investing in multiple asset classes representing domestic equities, global developed equities, and domestic bonds.
- Base allocations intend to over-allocate to equities with the goal of providing higher potential returns seen in equity markets.
- The Index rebalances on a monthly basis based on two market indicators (moving averages and momentum) with the intent of maintaining full base exposure to assets that exhibit positive trend and paring back investments experiencing downturns. It seeks to take advantage of the persistence of long and short-term price moves.
- Any additional exposure up to 100% is allocated to interest-bearing cash.
- The growth-driven Index design seeks to achieve positive returns in varying market conditions.

Monthly Returns*

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Full Year
2023	2.08%	-1.29%	1.26%										
2022	-3.99%	-1.19%	-0.83%	-3.44%	-1.35%	0.09%	0.14%	0.21%	0.22%	0.28%	0.32%	-0.61%	-9.80%
2021	-0.91%	1.76%	2.38%	3.24%	1.50%	0.27%	1.20%	1.75%	-3.26%	3.71%	-2.24%	3.12%	12.97%
2020	-0.60%	-6.71%	-1.73%	-0.13%	0.06%	-0.61%	2.29%	2.79%	-2.37%	-1.52%	5.33%	2.61%	-1.11%
2019	0.75%	0.13%	0.86%	1.38%	-2.83%	2.06%	-0.37%	-0.91%	0.78%	2.38%	1.46%	2.37%	8.24%
2018	*4.27%*	*-3.45%*	*-2.01%*	*0.97%*	*-0.24%*	*0.30%*	*1.99%*	0.84%	-0.23%	-2.69%	1.04%	-1.52%	-0.97%
2017	*0.99%*	*1.96%*	*0.91%*	*1.28%*	*1.71%*	*0.02%*	*1.96%*	*-0.03%*	*1.59%*	*1.47%*	*1.44%*	*1.02%*	*15.26%*
2016	*-1.36%*	*0.07%*	*0.05%*	*0.13%*	*0.26%*	*0.38%*	*1.30%*	*0.02%*	*0.19%*	*-1.52%*	*0.35%*	*1.18%*	*1.01%*
2015	*-0.83%*	*1.95%*	*-0.71%*	*0.66%*	*0.23%*	*-1.51%*	*1.30%*	*-4.03%*	*-0.95%*	*-0.12%*	*-0.53%*	*-0.75%*	*-5.29%*
2014	*-3.03%*	*3.88%*	*-0.22%*	*0.73%*	*1.34%*	*1.10%*	*-1.50%*	*1.50%*	*-2.35%*	*0.08%*	*0.99%*	*-0.26%*	*2.08%*
2013	*3.99%*	*0.05%*	*1.64%*	*2.70%*	*-0.61%*	*-2.20%*	*4.04%*	*-1.88%*	*4.04%*	*3.11%*	*1.37%*	*1.38%*	*18.81%*
2012	*0.52%*	*0.76%*	*1.28%*	*-0.57%*	*-4.81%*	*1.54%*	*0.70%*	*0.84%*	*1.31%*	*-0.76%*	*0.53%*	*1.34%*	*2.53%*
2011	*2.14%*	*2.43%*	*-1.14%*	*3.51%*	*-1.77%*	*-1.28%*	*-1.14%*	*-5.26%*	*-3.92%*	*-0.14%*	*-0.11%*	*0.27%*	*-6.57%*
2010	*-3.06%*	*0.89%*	*4.49%*	*-0.05%*	*-7.70%*	*-1.51%*	*3.49%*	*-1.35%*	*2.54%*	*1.92%*	*-2.23%*	*4.84%*	*1.55%*
2009	*-0.23%*	*-0.05%*	*0.38%*	*-0.26%*	*-0.11%*	*-0.48%*	*4.10%*	*1.95%*	*1.57%*	*-0.59%*	*2.95%*	*0.81%*	*10.38%*
2008	*-3.83%*	*-0.17%*	*0.11%*	*-0.30%*	*-0.07%*	*0.26%*	*0.28%*	*0.33%*	*0.15%*	*0.22%*	*1.06%*	*0.50%*	*-1.53%*
2007	*0.85%*	*-0.39%*	*1.30%*	*3.46%*	*1.61%*	*-0.72%*	*-1.54%*	*0.11%*	*3.63%*	*2.27%*	*-2.52%*	*-0.96%*	*7.12%*
2006	*3.59%*	*0.11%*	*1.60%*	*2.36%*	*-2.87%*	*0.03%*	*0.75%*	*1.67%*	*1.15%*	*2.89%*	*1.90%*	*1.72%*	*15.79%*
2005	*-1.76%*	*2.34%*	*-1.92%*	*-1.83%*	*1.22%*	*0.52%*	*2.38%*	*0.63%*	*1.92%*	*-1.93%*	*2.34%*	*1.91%*	*5.79%*
2004	*1.42%*	*1.63%*	*-0.37%*	*-2.32%*	*0.35%*	*1.52%*	*-2.69%*	*0.19%*	*0.78%*	*1.40%*	*3.54%*	*3.18%*	*8.77%*
2003	*-0.06%*	*0.42%*	*0.07%*	*0.14%*	*2.01%*	*0.64%*	*0.18%*	*2.18%*	*1.03%*	*4.48%*	*1.11%*	*5.37%*	*18.87%*
2002	*0.29%*	*0.37%*	*-0.36%*	*-0.06%*	*0.39%*	*-0.43%*	*0.47%*	*0.46%*	*0.71%*	*0.04%*	*-0.24%*	*0.64%*	*2.29%*
2001	*0.60%*	*0.52%*	*0.47%*	*0.08%*	*0.30%*	*0.29%*	*0.72%*	*0.45%*	*0.66%*	*0.52%*	*-0.15%*	*-0.14%*	*4.37%*
2000	*-4.70%*	*0.33%*	*5.64%*	*-3.37%*	*-1.77%*	*2.90%*	*-1.81%*	*2.43%*	*-2.87%*	*0.29%*	*0.76%*	*0.77%*	*-1.87%*
1999	*1.57%*	*-2.80%*	*2.22%*	*2.38%*	*-3.24%*	*3.28%*	*-0.52%*	*-0.07%*	*-0.70%*	*3.23%*	*2.22%*	*5.89%*	*13.89%*
1998	*0.91%*	*3.45%*	*3.20%*	*0.73%*	*-0.86%*	*2.00%*	*0.21%*	*-7.73%*	*3.11%*	*1.80%*	*2.33%*	*4.13%*	*13.48%*
1997	*1.67%*	*0.36%*	*-1.57%*	*3.14%*	*3.83%*	*3.82%*	*4.22%*	*-5.46%*	*4.57%*	*-4.23%*	*2.13%*	*1.04%*	*13.71%*
1996	*1.60%*	*0.05%*	*0.93%*	*1.54%*	*0.05%*	*0.37%*	*-2.91%*	*1.01%*	*2.36%*	*0.77%*	*4.67%*	*-1.49%*	*9.10%*
1995	*0.56%*	*1.28%*	*0.95%*	*2.14%*	*1.98%*	*0.68%*	*2.55%*	*-0.52%*	*2.22%*	*-0.40%*	*2.58%*	*2.25%*	*17.47%*
1994	*4.77%*	*-1.70%*	*-4.02%*	*1.70%*	*-0.07%*	*0.74%*	*0.55%*	*1.15%*	*-1.68%*	*1.85%*	*-2.59%*	*0.19%*	*0.59%*
1993	*0.94%*	*0.87%*	*2.42%*	*2.29%*	*1.86%*	*-0.50%*	*1.17%*	*3.89%*	*-1.24%*	*1.98%*	*-4.19%*	*2.68%*	*12.59%*
1992	*-2.18%*	*-1.04%*	*-1.58%*	*1.41%*	*0.56%*	*-0.17%*	*2.16%*	*-0.55%*	*0.18%*	*-0.57%*	*1.17%*	*0.81%*	*0.10%*
1991	*0.60%*	*1.27%*	*-0.30%*	*1.13%*	*1.71%*	*-3.37%*	*1.61%*	*1.44%*	*-0.14%*	*0.61%*	*-3.43%*	*4.08%*	*5.08%*
1990	*-4.51%*	*-0.73%*	*0.48%*	*-0.26%*	*1.05%*	*-0.33%*	*0.31%*	*-2.20%*	*0.60%*	*0.77%*	*0.74%*	*0.68%*	*-3.48%*

Source: Morgan Stanley, Bloomberg.
* Data based on simulated returns from July 3, 1989 to July 17, 2018 and actual thereafter. Data through March 31, 2023.
Please see Note on Simulated Returns.

Certain Key Risks

- The level of the Index can go down as well as up due to a number of factors. There can be no assurance that the Index will achieve positive returns.
- The Index adjusts the exposures to constituents according to their historical return performance. The signals and lookback periods used may not be optimal and different signals or lookback periods may give higher returns.
- The Index uses fixed maximum allocations across different constituents. This allocation may not be optimal and a different allocation may give higher returns or better risk management.
- The correlation between the Index and its constituents, and the correlation between the constituents, may vary over time and may increase or decrease by reference to a variety of factors which may include macroeconomic factors and speculation. As such, the current mix of assets and the constituents may not provide the desired diversification benefits sought by the Index.
- Allocation signals may dampen the performance of the Index in rising markets.
- It is possible that the Index will be composed of a very small number of constituents at any time and may have concentration in particular market(s).
- The future performance of the Index may bear little or no relation to the historical or hypothetical retrospective performance of the Index.
- The Index was established on July 18, 2018 and therefore has a very limited history. As the Index has very limited actual historical performance, any investment in the Index may involve greater risk than an investment in an Index with longer actual historical performance and a proven track record.
- Purchasers of products linked to the Index will have no access to the assets underlying the Index, including dividends and interest payments.
- Because there are costs associated with trading the futures contracts, the Strategy level will be lower than if there were no transaction costs and roll costs.
- Morgan Stanley and its affiliates may from time to time engage in transactions involving the components of the Index, which may negatively impact the level of the Index.

The risks identified above are not exhaustive.
Please see the full set of risk factors included in any disclosure materials relating to instruments linked to the Index for additional information.

Note on Simulated Returns

Back-testing and other statistical analyses provided herein use simulated analysis and hypothetical circumstances to estimate how the Index may have performed between December 29, 1989 and July 18, 2018, prior to its actual existence. The results obtained from such “back-testing” should not be considered indicative of the actual results that might be obtained from an investment in the Index. The actual performance of the Index may vary significantly from the results obtained from back-testing. Unlike an actual performance record, simulated results are achieved by means of the retroactive application of a back-tested model itself designed with the benefit of hindsight and knowledge of factors that may have possibly affected its performance. Morgan Stanley provides no assurance or guarantee that instruments linked to the Index will operate or would have operated in the past in a manner consistent with these materials. The hypothetical historical levels presented herein have not been verified by an independent third party, and such hypothetical historical levels have inherent limitations. In addition, results obtained from back-testing include hypothetical results that do not reflect the reinvestment of dividends and other earnings or the deduction of any expenses that an investor in any product, the return of which is linked to the performance of the Index, would have paid or actually paid and do not account for all financial risk that may affect the actual performance of any such investment. Alternative simulations, techniques, modeling or assumptions might produce significantly different results and prove to be more appropriate. Actual results will vary, perhaps materially, from the simulated returns presented in this document.

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