Morgan Stanley

MS Global Opportunities Index Performance Highlight

More than 3.5-Years Track Record in 2022 Q3



Overview



Summary Statistics, Simulated and Actual

		S&P 500	Barclays	
	MSGO Index	(Excess Return)	Aggregate Bond (Excess Return)	
YTD Return	-11.16%	-24.81%	-15.67%	
Return** Since Index Live Date	0.94%	7.91%	-1.53%	
1-Year Ann. Return	-11.14%	-16.56%	-15.69%	
3-Year Ann. Return	-1.26%	7.24%	-4.07%	
5-Year Ann. Return	0.87%	7.69%	-1.67%	
10-Year Ann. Return	2.61%	10.62%	-0.08%	
10-Year Ann. Volatility	4.15%	17.26%	3.85%	
10-Year Sharpe Ratio	0.63	0.62	-0.02	
Full Period Ann. Return	5.78%	6.04%	1.75%	
Full Period Max. Drawdown	14%	57%	18%	
Correlation to MSGO Index	100%	16%	34%	
** Annualized Return				

Please see Note on Simulated Returns. The Index Live Date is July 17, 2017 Source: Morgan Stanley, Bloomberg.

Construction in 3 steps

- Based on portfolio construction concepts that seek positive return opportunities in different market environments.
- The Index seeks to provide access to global opportunities by investing in **multiple asset classes** representing global equities, government bonds and major commodities.
- The Index attempts to build a **liquid** and **risk-balanced** portfolio. It **rebalances** on a **daily** basis with the intent of investing in assets that exhibit upward **trends** and paring back investments during market downturns. It seeks to take advantage of the persistence of long and short-term price moves that play out in various markets.
- In addition, a duration overlay based on underlying trends in the bond markets is used to dynamically adjust bond allocations in order to reduce interest rate risk and to potentially offer positive returns in rising rate environments with a negative duration exposure.
- Each asset's allocation is proportional to its recent **price trend** and is inversely proportional to its **risk** (measured as its historical realized volatility).
- Finally, the portfolio risk is monitored **daily** with a **5% volatility target** mechanism to attempt to keep volatility under control and to reduce the impact of price fluctuations.

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2022 Q3 Summary



- Index return for the third quarter was negative (-3.78%). After a pick up in July, both equities and bond fell overall.
- Equities across US, Germany saw a fall in the third guarter. Markets rose a little in July with expectation of cuts in interest rates but were turned lower after reaffirmation of US government's commitment to fighting inflation. Japanese markets also followed global equities market in September after a seeing rise in July and August.
- With a higher decline in equity market relative to bond, index was able to allocate more to the bond markets. Allocations to all 3 bond components were high due to higher yield with majority allocation to the 10-Year Japanese bond increasing throughout the quarter.
- Commodities as a whole class had a negative performance with energy as the weakest performing sector.

											Monthly		Returns
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Full Year
2022	-2.12%	0.33%	-0.80%	-0.83%	-0.17%	-4.27%	1.58%	-2.42%	-2.93%				
2021	-0.22%	-0.30%	0.41%	0.96%	0.99%	-0.28%	1.66%	-0.37%	-2.16%	0.58%	-1.07%	0.53%	0.69%
2020	0.90%	-0.26%	- 2.91%	0.71%	-0.07%	0.59%	1.72%	0.41%	0.46%	-0.70%	2.63%	2.18%	5.67%
2019	1.12%	-0.18%	1.87%	0.16%	0.02%	2.75%	-0.07%	2.60%	-1.56%	0.32%	0.15%	1.38%	8.82%
2018	1.54%	-2.18%	0.34%	-0.28%	1 .27%	-0.56%	-0.25%	0.20%	-0.58%	-2.08%	1.37%	0.44%	-0.85%
2017	-0.45%	2.68%	-0.78%	0.92%	0.11%	-1.71%	0.51%	1.10%	-0.47%	1.72%	0.91%	-0.24%	4.29%
2016	0.92%	0.83%	-0.21%	1.34%	0.56%	3.21%	-0.18%	-1.85%	0.17%	-1.32%	-1.01%	1.47%	3.90%
2015	1.96%	0.93%	-0.01%	0.08%	-0.51%	-0.47%	0.46%	-2.43%	0.48%	1.58%	0.32%	-1.42%	0.91%
2014	0.55%	2.14%	-0.44%	0.56%	2.79%	0.77%	-1.13%	1.42%	-0.53%	1.55%	1.28%	0.53%	9.84%
2013	0.24%	-0.20%	1.95%	0.44%	-0.42%	-0.99%	1.40%	-0.36%	2.57%	1.99%	1.87%	-1.82%	6.76%
2012	1.98%	1.20%	-0.89%	0.93%	-1.94%	0.78%	1.75%	0.93%	0.25%	-1.20%	0.48%	-0.29%	3.96%
2011	-1.02%	0.99%	-1.77%	2.86%	0.80%	-0.06%	3.48%	1.08%	-1.57%	1.19%	0.14%	0.36%	6.53%
2010	-0.98%	2.01%	0.29%	2.41%	0.52%	2.29%	0.99%	1.73%	1.57%	1.14%	-0.18%	1.84%	14.45%
2009	-0.55%	0.68%	0.31%	-0.63%	2.26%	0.04%	1.20%	0.48%	1.50%	-0.40%	3.36%	-1.52%	6.84%
2008	1.50%	3.61%	-0.99%	-2.25%	1.39%	1.81%	-0.37%	0.47%	0.15%	0.06%	2.38%	1.67%	9.71%
2007	0.30%	1.07%	-0.69%	1.02%	0.05%	0.40%	0.25%	2.12%	2.32%	2.29%	0.94%	0.54%	11.09%
2006	1.60%	-1.22%	0.11%	1.41%	-2.09%	-0.58%	0.82%	2.06%	0.35%	1.66%	1.95%	-1.13%	4.94%
2005	-1.06%	2.17%	-0.11%	-1.74%	1.76%	1.27%	0.55%	0.44%	0.91%	-1.77%	3.45%	1.64%	7.62%
2004	1.01%	2.06%	1.05%	-2.63%	-0.42%	-0.31%	-0.51%	2.32%	0.99%	1.63%	0.94%	1.06%	7.33%
2003	1.53%	1.20%	-1.88%	1.18%	2.63%	-1.37%	-0.06%	1.80%	1.10%	0.84%	0.18%	2.76%	10.26%
2002	-1.62%	1.05%	1.77%	-0.03%	2.10%	0.08%	1.32%	1.89%	2.11%	-0.91%	-0.51%	3.70%	11.36%

Please see Note on Simulated Returns. The Index Live Date is July 17, 2017 Source: Morgan Stanley, Bloomberg.

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 January 14, 2005 and July 17, 2017, 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.

Source: Morgan Stanley, Bloomberg

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Certain Key Risks

- The level of the Index can go down as well as up. There can be no assurance that the Index will achieve positive returns.
- The base allocation is determined in reference to each Index's risk budget and volatility and may not result in optimal allocation.
- There are risks associated with a momentum based

investment strategy. If market conditions do not represent a continuation of prior-observed trends, the performance of the Index, which is rebalanced based on prior trends, may be adversely affected.

- The Strategy adjusts the exposures to the Underlying Traded Instruments according to their historical return performance. The moving averages used may not be optimal and different decays may give higher returns.
- While the Index has a volatility target of 5.0%, it may not achieve its target volatility, even if the asset portfolio is rebalanced daily.
- There can be no assurance that the actual volatility of the Index will be lower than the volatility of any or all of the index components.
- The volatility target feature of the Index may dampen its performance in bullish markets.
- 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 17, 2017 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.
- The Strategy may take short positions in fixed income Underlying Traded Instruments based on historical prices. Short positions in any investment carry the risk of unlimited loss exposure. If the Strategy takes a short position in an Underlying Traded Instrument, a positive return on such Underlying Traded Instrument will have a negative impact on the level of the Strategy.
- For non-U.S. dollar Underlying Traded Instruments, there is a component of the Strategy's daily performance which derives from FX moves. This FX risk can amplify or reduce the daily performance of the future and forward positions and can, over time, induce a bias in performance that a non-USD investor would not face.
- 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.

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.

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