

Factsheet

GS Momentum Builder® Multi-Asset 5S ER Index

INDEX INFORMATION¹

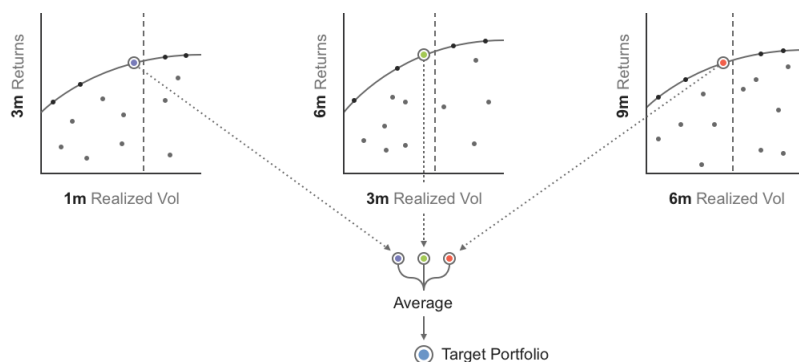
Ticker	GSMBMA5S
RIC	.GSMBMA5S
Thomson Identifier	.GSMBMA5S (TBC)
Index Sponsor	Goldman Sachs & Co. LLC
Currency	USD
Number of Underliers	max. 15
Volatility Target	5.00%
Volatility Cap	6.00%
Index Calculation Agent	Solactive AG
Index Base Date	July 31, 2015
Launch Date	May 16, 2016

INDEX OVERVIEW²

The GS Momentum Builder® Multi-Asset 5S ER Index:

- o Provides exposure to ETFs whose underlying indexes track broad-based equities, fixed income, emerging markets, commodities, inflation and alternative assets
- o Seeks to provide exposure to price momentum of several asset classes using a methodology developed by Goldman Sachs & Co. LLC (Index Sponsor)
- o Combines 14 underlying ETFs across six asset classes and a cash equivalent through a Money Market Position that seeks to capture the highest historical return among the universe of underlying assets selected following the index methodology, subject to constraints on minimum and maximum weights and volatility controls
- o Is rebalanced daily across the underlying assets and may deleverage the portfolio into the deleverage position (Money Market Position) as frequently as daily if the realized volatility exceeds the volatility cap
- o Applies two levels of volatility control across the portfolio:
 - o Target volatility: 5%. It is measured on a daily basis and sets a maximum limit on the annualized historical realized volatility of each daily target portfolio.
 - o Volatility cap: 6%. It is measured on a daily basis. The index is rebalanced whenever the annualized historical realized volatility exceeds the volatility cap.
- o Is calculated on an excess return basis over the sum of (i) a notional cash deposit at 3-month USD LIBOR, compounded daily and (ii) 0.65% per annum (accruing daily), with gross dividends reinvested

REBALANCING PROCESS



For illustrative purposes only

- Step 1: On each index business day, test all the possible portfolio combinations of the underlying assets (comprised of the 14 ETFs and the Money Market Position)
- Step 2: For each realized volatility look-back period (the prior six months, three months and one month) consider only those portfolios that have a realized volatility of 5% or less for such look-back period
- Step 3: Of the remaining portfolios for each realized volatility look-back period, choose the portfolio for such realized volatility lookback-period that has the highest realized historical return over the related return look-back period (the prior nine months, six months and three months for the six-month, three-month and one-month realized volatility look-back periods, respectively)
- Step 4: Average the weights of each underlying asset in the 3 portfolios chosen in step 3 (one portfolio for each of the 3 {return look-back period, realized volatility look-back period} pairs) to determine the target weight of such underlying asset for that day
- Step 5: Average the target weights of each underlying asset over the weight averaging period which is comprised of such day and each of the prior 21 index business days to determine the daily weight of such underlying asset, effective after the close of business on that day
- Step 6: On a daily basis, monitor the realized volatility of the index underlying assets, if this volatility exceeds 6%, a pro-rata portion of the underlying assets is allocated to the deleverage position (Money Market Position).

Third parties may from time to time issue ETFs and other investment products that track this index and other similar indexes. For information about such third party products tracking the index, please refer to the applicable Prospectus.

¹ The strategy and rebalancing process are further described in the full rulebook available at <http://www.solactive.com/wp-content/uploads/2016/05/GSMBMA5S-Index-Methodology-Final.pdf>.

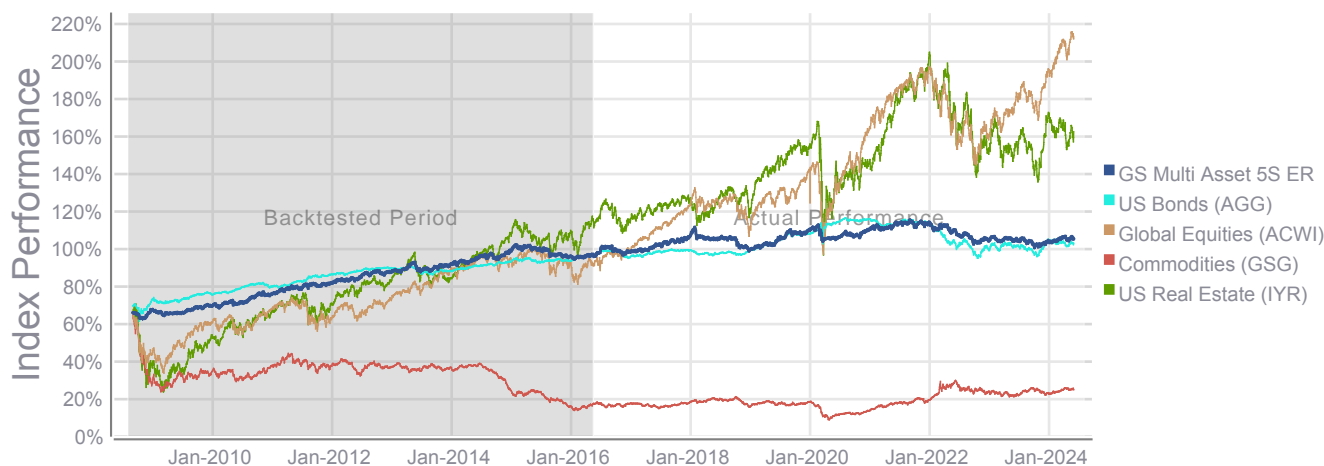
² Real time prices and additional information are available at <http://www.solactive.com>.

INDEX COMPOSITION

ASSET CLASS	NAME	TICKER	ASSET CLASS MAX WEIGHT	MIN WEIGHT	MAX WEIGHT
Broad-Based Equities	SPDR S&P 500 ETF Trust	SPY		0%	20%
	iShares MSCI Japan ETF	EWJ	50%	0%	10%
	iShares MSCI EAFE ETF	EFA		0%	20%
Fixed Income	iShares 7-10 Year Treasury Bond ETF	IEF		0%	20%
	iShares 20+ Year Treasury Bond ETF	TLT	50%	0%	20%
	iShares iBoxx \$ Investment Grade Corporate Bond ETF	LQD		0%	20%
	iShares iBoxx \$ High Yield Corporate Bond ETF	HYG		0%	20%
Emerging Markets	iShares MSCI Emerging Markets ETF	EEM	20%	0%	20%
Alternatives	iShares Nasdaq Biotechnology ETF	IBB		0%	10%
	iShares U.S. Real Estate ETF	IYR	25%	0%	20%
	iShares U.S. Preferred Stock ETF	PFF		0%	10%
Commodities	SPDR S&P Oil & Gas Exploration & Production ETF	XOP	25%	0%	20%
	SPDR Gold Trust	GLD		0%	20%
Inflation	iShares TIPS Bond ETF	TIP	10%	0%	10%
Cash Equivalent	Money Market Position	N/A	50%*	0%	50%*

* With respect to the Money Market Position, the related asset class maximum weight and underlying asset maximum weight limitations do not apply after the first rebalancing on each index business day and, therefore, the index may allocate its entire exposure to the Money Market Position.

INDEX PERFORMANCE VS. INDIVIDUAL ASSET CLASS SPECIFIC ETFs SINCE AUGUST 29, 2008³

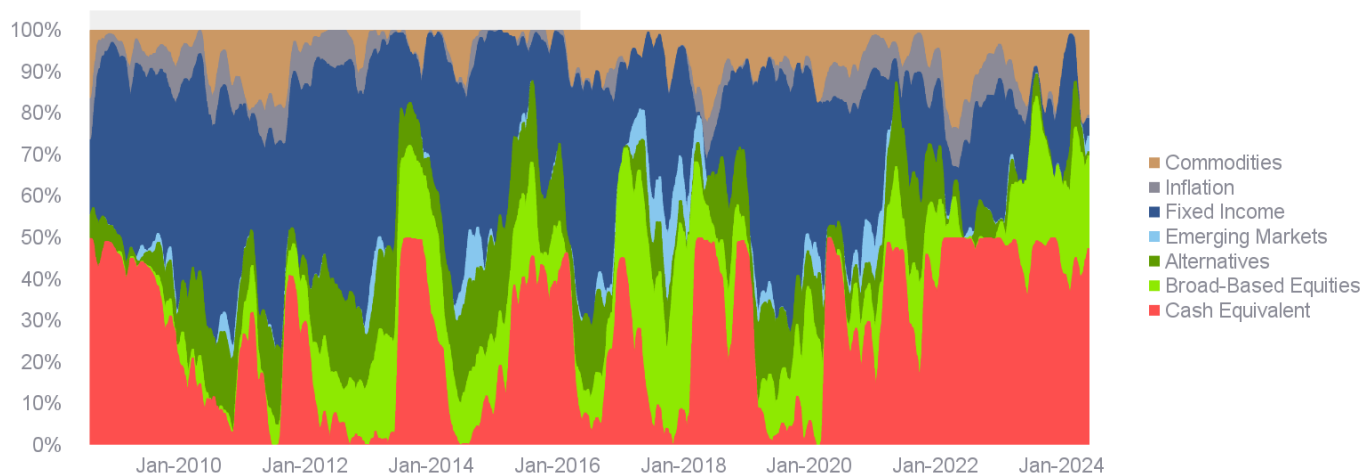


³ The values of the individual asset class specific ETFs are total return (i.e., ETF dividends are reinvested). The total return versions are calculated by Solactive AG. Base Date: July 31, 2015, values from August 29, 2008 to May 15, 2016 for GS Momentum Builder® Multi-Asset 5S ER Index based on back-testing. Back-testing and other statistical analysis material that is provided in connection with the index use simulated analysis and hypothetical circumstances to estimate how it may have performed prior to its actual existence. The performance is normalized such that the graph shows the percentage change in the individual asset class specific ETFs and the index as compared to their respective closing levels on August 29, 2008. The results obtained from "back-testing" information should not be considered indicative of the actual results that might be obtained from an investment or participation in a financial instrument or transaction referencing the index.

Neither Solactive AG nor Goldman Sachs provide assurance or guarantee that the products 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. 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. See "Important Information" on page 5 for more information on back-testing.

HISTORICAL WEIGHTINGS (Pre-Volatility Control)³

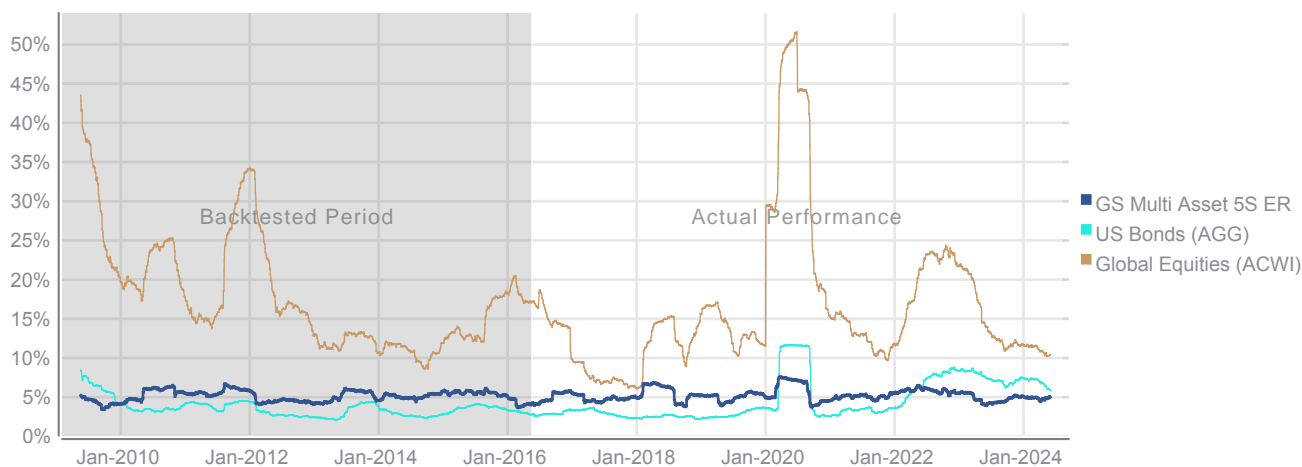
Includes back-tested, hypothetical performance; does not reflect actual index performance



The graph above sets forth the daily allocation on each index business day for each asset class within the Base Index. For the avoidance of doubt, the allocation shown above does not take into account the Deleverage Position (Money Market Position) resulting from the volatility control feature. The volatility control feature would rebalance a portion of the Base Index into the Deleverage Position if the realized volatility of the Base Index exceeds the Volatility Cap of 6%.

ROLLING 6-MONTH REALIZED VOLATILITY (p.a.) (Post-Volatility Control)³

Includes back-tested, hypothetical performance; does not reflect actual index performance



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INDEX REPORTING
 GS Momentum Builder® Multi-Asset 5S ER Index
 As of Jun-03-2024



STATISTICS (Post Volatility Control)³

Includes back-tested, hypothetical performance; does not reflect actual index performance

AS OF AS OF JUN-03-2024	GS Multi Asset 5S ER US Bonds (AGG)	Global Equities (ACWI)	Commodities (GSG)	US Real Estate (IYR)
Effective Performance (1M)	1.04%	1.67%	4.52%	4.93%
Effective Performance (6M)	2.32%	2.05%	14.30%	3.73%
Effective Performance (1Y)	1.27%	1.31%	23.56%	8.44%
Effective Performance (3Y)	-6.45%	-8.91%	16.49%	-6.35%
Effective Performance (5Y)	2.56%	-1.09%	74.20%	14.51%
Annualized Performance (since August 2008) ⁴	3.00%	2.53%	7.72%	5.87%
Annualized Volatility (since August 2008) ^{4 5}	5.25%	5.49%	21.25%	30.82%
Return over Risk (since August 2008) ⁶	0.57	0.46	0.36	0.19
Maximum Drawdown (since August 2008) ⁷	12.89%	18.44%	48.83%	66.20%

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⁴ Calculated on a annualized basis since August 29, 2008.

⁵ Calculated on the same basis as realized volatility used in calculating the index.

⁶ Calculated by dividing the annualized performance by the annualized realized volatility since August 29, 2008.

⁷ The largest percentage decline experienced in the relevant measure from a previously occurring maximum level.

DETAILED HISTORICAL MONTHLY PERFORMANCE (Post-Volatility Control)³

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
2024	-0.17%	0.99%	1.35%	-2.02%	1.04%								1.16%
2023	1.77%	-1.98%	1.17%	0.32%	-1.55%	0.65%	0.94%	-1.42%	-1.96%	-0.77%	1.57%	1.14%	-0.22%
2022	-2.82%	0.59%	0.72%	-1.99%	-0.37%	-2.38%	1.09%	-1.77%	-2.95%	0.30%	1.72%	-0.94%	-8.59%
2021	-0.37%	0.15%	0.14%	0.84%	0.89%	0.66%	0.56%	0.59%	-2.81%	2.09%	-1.09%	1.46%	3.07%
2020	-0.22%	-2.04%	-2.00%	0.14%	0.63%	0.28%	1.88%	-0.43%	-0.90%	-0.97%	2.76%	1.78%	0.79%
2019	1.61%	-0.54%	1.87%	0.15%	-0.18%	2.62%	0.42%	3.69%	-1.19%	0.53%	-0.47%	1.29%	10.11%
2018	2.79%	-3.15%	-0.59%	-0.59%	0.18%	0.47%	-0.01%	0.56%	-0.60%	-4.56%	0.40%	-1.53%	-6.62%
2017	0.35%	0.73%	0.36%	0.80%	1.08%	0.34%	1.67%	0.71%	-0.61%	0.90%	0.93%	1.28%	8.86%
2016	-0.49%	0.55%	0.39%	0.44%	-0.48%	3.63%	1.59%	-0.98%	-0.66%	-1.49%	-0.28%	0.23%	2.40%
2015	3.43%	-1.19%	-0.02%	-0.75%	0.21%	-1.06%	0.55%	-2.87%	-0.45%	0.39%	-0.60%	-0.50%	-2.93%
2014	-0.27%	1.98%	-0.95%	1.00%	1.59%	1.42%	-1.54%	2.76%	-3.02%	1.86%	1.73%	0.63%	7.25%
2013	0.51%	0.09%	1.59%	2.73%	-2.86%	-1.27%	1.14%	-1.15%	1.90%	1.01%	0.54%	0.71%	4.92%
2012	1.81%	0.18%	-0.20%	1.08%	-0.30%	1.57%	2.18%	0.03%	0.50%	-0.96%	0.71%	0.21%	6.97%
2011	0.80%	2.49%	0.26%	1.74%	-0.19%	-1.74%	2.97%	0.09%	-0.94%	0.65%	0.51%	0.89%	7.69%
2010	-0.52%	1.27%	1.36%	1.66%	-1.99%	1.38%	0.70%	3.24%	1.06%	0.69%	-0.58%	0.99%	9.55%
2009	-2.14%	-1.74%	1.14%	-0.31%	0.94%	0.01%	2.34%	0.09%	1.90%	-1.04%	2.55%	-0.71%	2.94%
2008								0.00%	-1.57%	-3.56%	3.74%	3.85%	2.28%

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DETAILED HISTORICAL WEIGHTINGS

Weights as of the last index business day of each month before the daily volatility control is applied

	SPY	EWJ	EFA	IEF	TLT	LQD	HYG	EEM	IBB	IYR	PFF	XOP	GLD	TIP	CASH
Aug-2008	-	-	-	17.9%	10.7%	-	0.2%	-	9.7%	0.8%	-	3.5%	4.1%	8.7%	44.5%
Sep-2008	-	-	-	18.2%	18.6%	-	0.0%	-	7.8%	2.3%	-	1.6%	1.2%	5.9%	44.4%
Oct-2008	-	-	-	20.0%	18.7%	1.7%	0.0%	0.1%	3.4%	0.9%	0.0%	-	1.2%	4.0%	49.9%
Nov-2008	-	0.0%	-	20.0%	19.4%	2.9%	-	0.0%	4.0%	0.4%	0.1%	-	1.0%	2.3%	50.0%
Dec-2008	0.3%	0.0%	-	20.0%	11.1%	8.2%	0.2%	0.0%	3.9%	0.5%	0.3%	-	2.7%	2.9%	50.0%
Jan-2009	1.1%	-	-	19.7%	7.8%	11.3%	0.4%	-	2.9%	0.2%	0.8%	0.2%	3.5%	3.3%	48.7%
Feb-2009	-	-	-	18.7%	5.6%	11.8%	2.0%	-	4.5%	-	-	-	8.8%	3.5%	45.0%
Mar-2009	0.5%	-	-	17.0%	1.5%	10.7%	3.2%	0.0%	1.6%	0.0%	0.0%	0.3%	7.1%	8.0%	49.9%
Apr-2009	0.2%	-	-	19.7%	0.5%	16.3%	1.0%	1.3%	1.5%	-	-	0.1%	3.1%	6.4%	50.0%
May-2009	-	0.1%	-	17.1%	0.7%	13.3%	3.3%	3.0%	0.0%	-	1.3%	-	5.8%	5.5%	50.0%
Jun-2009	-	0.5%	-	7.5%	-	16.7%	8.3%	0.2%	0.4%	-	3.6%	-	7.7%	5.2%	49.9%
Jul-2009	-	1.3%	0.1%	3.8%	-	19.0%	7.0%	3.0%	0.4%	0.0%	5.1%	-	6.7%	5.2%	48.4%
Aug-2009	0.7%	3.1%	0.0%	-	0.2%	20.0%	6.1%	2.3%	2.9%	0.4%	6.7%	-	5.0%	7.8%	44.8%
Sep-2009	1.5%	3.2%	1.8%	5.1%	1.6%	20.0%	9.6%	0.6%	3.7%	1.0%	5.3%	-	4.8%	7.6%	34.3%
Oct-2009	3.1%	0.1%	2.0%	6.7%	2.2%	13.7%	7.7%	3.7%	2.9%	0.4%	7.7%	0.3%	5.7%	9.8%	34.1%
Nov-2009	0.3%	-	0.4%	7.6%	0.9%	15.4%	13.4%	2.2%	0.5%	0.6%	7.0%	0.0%	9.9%	10.0%	31.8%
Dec-2009	6.0%	0.1%	-	8.9%	0.1%	14.9%	19.1%	0.3%	0.1%	1.4%	9.4%	-	7.3%	10.0%	22.2%
Jan-2010	7.7%	0.9%	-	4.6%	-	17.0%	19.8%	0.0%	1.4%	6.0%	10.0%	-	3.8%	10.0%	18.8%

INDEX REPORTING

GS Momentum Builder® Multi-Asset 5S ER Index

As of Jun-03-2024



	SPY	EWJ	EFA	IEF	TLT	LQD	HYG	EEM	IBB	IYR	PFF	XOP	GLD	TIP	CASH
Feb-2010	0.3%	3.0%	-	9.3%	0.1%	16.0%	17.0%	-	7.4%	3.7%	10.0%	0.3%	4.5%	9.5%	18.9%
Mar-2010	2.7%	1.6%	-	12.6%	0.4%	15.6%	15.9%	-	6.8%	7.0%	10.0%	1.7%	1.2%	7.1%	17.4%
Apr-2010	7.2%	0.9%	-	8.7%	0.3%	19.6%	15.2%	-	4.7%	11.9%	7.7%	-	0.4%	6.7%	16.5%
May-2010	3.9%	0.2%	-	17.4%	10.8%	14.5%	4.8%	-	1.8%	11.6%	5.5%	-	11.4%	7.6%	10.4%
Jun-2010	-	-	-	19.6%	17.8%	7.6%	1.0%	0.0%	-	11.7%	6.3%	1.0%	15.9%	7.4%	11.6%
Jul-2010	-	-	-	19.9%	17.3%	12.0%	0.1%	0.3%	-	7.6%	8.1%	0.5%	14.1%	9.9%	10.3%
Aug-2010	-	-	1.0%	19.7%	19.1%	10.4%	0.8%	4.5%	-	10.0%	10.0%	-	5.8%	9.5%	9.2%
Sep-2010	-	-	2.5%	17.2%	15.1%	12.3%	5.4%	5.2%	0.3%	8.9%	10.0%	0.0%	8.3%	8.5%	6.3%
Oct-2010	0.1%	-	0.5%	17.7%	8.3%	13.4%	10.4%	3.6%	2.1%	8.4%	9.1%	-	15.2%	7.7%	3.5%
Nov-2010	2.2%	-	0.5%	15.8%	1.1%	10.3%	15.4%	3.0%	3.5%	4.7%	7.5%	3.2%	9.2%	8.8%	14.6%
Dec-2010	3.9%	0.0%	-	11.0%	-	9.1%	14.0%	0.2%	6.0%	1.2%	7.2%	8.9%	7.5%	3.8%	27.3%
Jan-2011	9.6%	2.6%	0.3%	6.7%	-	4.0%	15.4%	0.3%	5.9%	0.2%	7.3%	14.1%	5.8%	2.2%	25.6%
Feb-2011	8.7%	2.7%	-	4.6%	0.1%	7.4%	12.8%	-	1.3%	1.2%	5.6%	16.9%	3.4%	1.5%	33.7%
Mar-2011	6.9%	0.0%	-	4.8%	1.6%	11.0%	19.7%	-	2.4%	1.7%	6.3%	13.3%	6.0%	8.7%	17.5%
Apr-2011	0.4%	-	-	2.2%	4.1%	9.0%	18.5%	-	7.8%	1.6%	9.2%	12.4%	8.4%	9.8%	16.5%
May-2011	7.1%	-	-	5.3%	9.8%	11.2%	14.5%	0.4%	10.0%	3.9%	7.5%	2.1%	16.0%	9.3%	3.0%
Jun-2011	5.3%	-	0.7%	17.0%	11.6%	8.2%	8.0%	0.7%	9.6%	8.3%	0.6%	1.0%	19.2%	9.8%	-
Jul-2011	2.1%	2.6%	-	18.1%	7.9%	11.2%	6.7%	-	9.2%	9.1%	2.9%	1.7%	18.4%	9.8%	0.3%
Aug-2011	2.3%	1.3%	-	18.4%	6.5%	6.4%	3.4%	1.0%	3.0%	0.3%	1.0%	1.1%	19.0%	9.0%	27.4%
Sep-2011	5.5%	0.5%	-	20.0%	8.8%	0.6%	1.2%	0.0%	4.0%	1.2%	-	0.1%	10.9%	6.3%	40.9%
Oct-2011	7.4%	2.7%	-	20.0%	17.2%	0.7%	2.3%	-	1.5%	0.1%	-	-	2.9%	7.4%	37.8%
Nov-2011	13.0%	0.0%	-	20.0%	16.9%	2.1%	3.0%	-	2.6%	0.0%	0.7%	1.4%	4.5%	8.9%	26.7%
Dec-2011	9.5%	0.0%	-	17.4%	17.9%	0.5%	7.1%	-	4.7%	0.3%	0.2%	0.1%	2.9%	9.9%	29.6%
Jan-2012	9.6%	-	-	17.0%	18.6%	1.6%	11.1%	0.1%	6.3%	2.5%	2.2%	0.7%	3.3%	9.9%	16.9%
Feb-2012	15.1%	1.4%	-	14.6%	17.4%	6.8%	9.8%	-	8.1%	3.3%	6.4%	0.4%	1.3%	6.1%	9.4%
Mar-2012	19.1%	1.2%	-	8.6%	12.1%	13.8%	8.9%	0.5%	7.6%	4.9%	9.8%	0.8%	0.7%	6.9%	5.1%
Apr-2012	18.5%	1.4%	-	11.8%	9.6%	13.4%	7.2%	-	6.7%	7.6%	8.5%	0.2%	0.2%	9.0%	5.8%
May-2012	13.4%	-	-	15.8%	17.1%	4.6%	11.2%	-	8.8%	9.7%	5.0%	-	-	9.3%	5.0%
Jun-2012	11.6%	-	-	13.8%	19.8%	10.0%	4.9%	-	9.8%	8.6%	5.2%	-	-	9.7%	6.6%
Jul-2012	9.2%	0.0%	-	11.9%	20.0%	13.7%	4.4%	-	9.5%	12.1%	3.4%	-	-	9.7%	6.2%
Aug-2012	14.8%	-	1.6%	4.0%	17.8%	19.2%	8.3%	-	8.9%	9.0%	6.6%	0.5%	0.7%	7.5%	0.9%
Sep-2012	13.0%	-	3.2%	1.9%	13.5%	18.5%	13.0%	-	9.8%	9.7%	5.3%	1.9%	2.1%	6.0%	2.0%
Oct-2012	13.6%	-	2.2%	1.3%	13.1%	20.0%	7.0%	0.1%	8.8%	4.2%	8.9%	1.7%	10.8%	6.1%	2.4%
Nov-2012	6.3%	-	8.8%	1.7%	13.8%	20.0%	12.1%	0.5%	5.5%	2.1%	9.5%	0.1%	10.9%	8.1%	0.6%
Dec-2012	2.9%	0.8%	15.0%	4.3%	12.5%	18.2%	13.4%	8.3%	4.0%	4.8%	4.7%	0.3%	1.6%	9.1%	0.1%
Jan-2013	0.1%	1.5%	19.3%	4.0%	9.7%	12.5%	18.0%	10.2%	3.3%	6.0%	7.7%	-	0.1%	5.4%	2.0%
Feb-2013	6.2%	4.1%	18.8%	4.0%	3.4%	12.9%	16.8%	3.9%	2.9%	11.0%	7.8%	1.0%	0.5%	4.7%	1.9%
Mar-2013	7.2%	7.5%	13.2%	8.6%	2.0%	14.1%	19.8%	1.7%	4.7%	6.8%	9.6%	1.0%	-	1.9%	1.7%
Apr-2013	10.0%	8.2%	7.9%	11.5%	10.1%	6.8%	17.4%	-	7.7%	9.1%	6.5%	1.5%	-	1.7%	1.6%
May-2013	10.7%	9.9%	4.9%	10.3%	12.0%	7.3%	17.9%	-	9.6%	4.9%	8.9%	-	-	0.6%	2.9%
Jun-2013	19.5%	5.8%	0.5%	10.5%	2.4%	2.4%	4.4%	-	9.4%	0.1%	5.7%	0.6%	-	0.1%	38.7%
Jul-2013	17.0%	3.1%	-	15.0%	0.1%	0.3%	2.7%	-	7.0%	-	2.3%	1.4%	0.1%	1.0%	50.0%
Aug-2013	19.3%	1.5%	1.3%	8.7%	-	-	3.6%	-	10.0%	-	0.3%	4.0%	1.5%	-	49.8%
Sep-2013	14.6%	1.2%	3.0%	7.4%	-	0.1%	7.4%	-	10.0%	-	-	4.0%	1.9%	0.9%	49.6%
Oct-2013	12.0%	0.3%	5.3%	8.1%	-	-	7.0%	0.3%	6.1%	-	-	10.4%	0.7%	1.1%	48.8%
Nov-2013	16.9%	0.4%	6.2%	6.0%	0.0%	3.5%	14.4%	1.2%	5.6%	-	1.0%	3.3%	0.2%	0.6%	40.6%
Dec-2013	19.2%	0.4%	6.8%	2.8%	-	8.0%	18.3%	-	9.1%	-	0.6%	0.8%	-	0.6%	33.3%
Jan-2014	17.0%	-	12.1%	0.1%	0.3%	12.7%	17.1%	-	8.8%	-	2.7%	0.9%	-	-	28.2%

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As of Jun-03-2024



	SPY	EWJ	EFA	IEF	TLT	LQD	HYG	EEM	IBB	IYR	PFF	XOP	GLD	TIP	CASH
Feb-2014	13.5%	-	1.2%	1.6%	6.4%	13.3%	17.6%	-	9.8%	1.4%	5.5%	0.4%	1.2%	1.5%	26.6%
Mar-2014	17.0%	-	1.1%	0.5%	9.8%	16.1%	15.3%	-	7.7%	6.2%	5.8%	0.0%	6.0%	3.0%	11.4%
Apr-2014	14.4%	-	2.0%	0.4%	14.7%	18.3%	14.0%	0.7%	1.0%	8.6%	9.9%	8.3%	3.1%	0.6%	4.0%
May-2014	11.6%	-	0.5%	-	19.3%	17.7%	6.1%	6.0%	0.0%	14.0%	8.4%	13.6%	1.2%	0.8%	0.7%
Jun-2014	9.6%	0.6%	2.9%	-	19.4%	12.8%	7.8%	6.6%	-	16.5%	7.3%	14.1%	0.6%	1.5%	0.3%
Jul-2014	14.4%	3.0%	0.0%	0.1%	19.4%	8.3%	3.1%	11.3%	3.9%	15.6%	5.5%	9.7%	2.3%	3.4%	-
Aug-2014	14.0%	3.3%	-	4.1%	19.7%	9.7%	1.5%	11.6%	5.3%	13.1%	4.4%	2.2%	0.5%	7.3%	3.4%
Sep-2014	17.9%	2.3%	-	5.5%	19.9%	13.5%	0.4%	10.7%	5.3%	10.7%	6.2%	0.9%	0.6%	1.9%	4.4%
Oct-2014	11.5%	0.3%	-	18.4%	20.0%	11.2%	-	0.3%	8.3%	9.6%	5.2%	-	-	3.6%	11.7%
Nov-2014	16.4%	0.3%	-	18.8%	20.0%	7.1%	0.0%	1.8%	7.4%	14.5%	3.1%	-	-	0.2%	10.4%
Dec-2014	17.5%	-	-	20.0%	20.0%	7.9%	-	0.3%	7.1%	16.1%	1.6%	-	-	0.5%	9.0%
Jan-2015	13.1%	0.4%	-	18.0%	20.0%	4.2%	-	0.0%	4.8%	17.9%	1.4%	-	0.0%	-	20.0%
Feb-2015	16.5%	1.0%	0.0%	16.3%	20.0%	6.8%	1.2%	0.0%	7.1%	11.2%	6.1%	-	0.6%	-	13.3%
Mar-2015	10.0%	5.1%	0.6%	10.0%	16.9%	3.3%	4.4%	-	10.0%	2.2%	10.0%	1.4%	-	-	26.1%
Apr-2015	6.9%	7.3%	2.7%	7.3%	12.7%	0.4%	1.7%	0.0%	9.8%	1.4%	9.9%	2.4%	-	1.1%	36.4%
May-2015	7.0%	8.1%	6.9%	10.7%	5.4%	-	3.6%	2.1%	7.8%	-	8.4%	0.9%	0.5%	1.5%	37.1%
Jun-2015	5.1%	9.8%	4.9%	8.3%	2.1%	-	7.9%	1.6%	10.0%	0.0%	8.0%	1.6%	1.6%	1.0%	38.1%
Jul-2015	12.4%	7.7%	2.8%	5.3%	1.6%	-	2.0%	0.1%	10.0%	0.1%	9.2%	-	-	3.6%	45.3%
Aug-2015	5.6%	6.5%	1.9%	16.2%	11.2%	0.2%	-	-	8.9%	1.5%	8.6%	-	-	0.9%	38.5%
Sep-2015	-	2.9%	-	20.0%	10.1%	3.2%	1.9%	-	5.9%	-	8.9%	-	-	2.6%	44.5%
Oct-2015	3.2%	3.0%	2.6%	19.7%	7.4%	4.8%	-	-	0.3%	6.7%	8.0%	-	3.5%	1.7%	39.0%
Nov-2015	8.7%	3.8%	-	16.5%	4.3%	6.5%	-	0.7%	1.0%	5.4%	9.0%	0.8%	2.6%	-	40.6%
Dec-2015	9.5%	4.1%	0.1%	14.5%	8.7%	3.1%	-	-	0.1%	11.0%	7.6%	0.0%	-	0.6%	40.8%
Jan-2016	4.1%	0.9%	-	17.4%	14.0%	2.0%	-	-	0.4%	5.9%	7.4%	-	0.8%	1.8%	45.4%
Feb-2016	0.6%	-	-	20.0%	19.0%	-	-	-	-	0.4%	3.9%	-	10.6%	1.4%	44.2%
Mar-2016	3.8%	-	-	18.4%	18.3%	3.2%	3.3%	1.0%	-	10.2%	7.1%	0.0%	13.8%	0.5%	20.4%
Apr-2016	10.9%	-	-	12.2%	18.1%	16.7%	2.3%	1.6%	-	7.6%	7.9%	0.6%	10.4%	2.0%	9.6%
May-2016	7.2%	-	-	10.1%	8.2%	19.3%	8.3%	-	0.1%	12.5%	8.4%	1.6%	14.6%	1.2%	8.5%
Jun-2016	8.6%	-	-	5.4%	18.5%	17.4%	8.4%	-	0.3%	11.0%	9.8%	4.7%	9.8%	1.2%	4.9%
Jul-2016	9.8%	1.0%	-	6.0%	17.5%	15.5%	9.9%	-	-	10.1%	9.4%	2.4%	11.8%	0.2%	6.3%
Aug-2016	13.0%	0.8%	-	2.1%	13.7%	12.7%	10.2%	5.6%	2.5%	13.0%	6.8%	1.5%	12.7%	-	5.4%
Sep-2016	5.3%	3.5%	0.2%	3.0%	7.0%	14.0%	18.0%	3.6%	2.0%	4.6%	7.4%	2.1%	12.8%	1.7%	15.0%
Oct-2016	3.0%	5.1%	0.8%	2.6%	2.1%	14.1%	20.0%	2.3%	1.2%	-	4.8%	4.8%	5.8%	7.4%	26.1%
Nov-2016	9.2%	7.2%	-	0.2%	0.4%	9.4%	16.8%	2.8%	0.5%	-	1.0%	7.2%	3.0%	7.2%	35.1%
Dec-2016	16.6%	6.4%	0.1%	-	-	4.8%	16.7%	0.1%	0.0%	-	-	6.6%	-	1.5%	47.2%
Jan-2017	19.6%	6.2%	5.4%	-	-	0.3%	17.1%	0.0%	0.4%	0.2%	-	9.6%	-	0.5%	40.7%
Feb-2017	20.0%	6.9%	7.5%	-	0.0%	-	18.5%	5.7%	1.2%	2.4%	1.5%	5.6%	0.3%	0.3%	30.2%
Mar-2017	17.7%	5.9%	13.8%	-	1.1%	0.3%	13.9%	7.5%	4.1%	1.4%	2.2%	-	5.8%	-	26.5%
Apr-2017	17.5%	4.4%	18.4%	-	0.7%	-	12.1%	7.0%	2.6%	5.9%	2.5%	-	6.7%	-	22.2%
May-2017	17.1%	4.0%	20.0%	1.1%	5.9%	7.2%	9.4%	10.4%	2.5%	3.8%	4.8%	-	1.4%	-	12.4%
Jun-2017	13.3%	4.5%	19.8%	1.3%	11.2%	10.5%	6.8%	11.8%	1.4%	4.7%	4.8%	-	4.6%	-	5.3%
Jul-2017	10.5%	4.8%	19.8%	3.4%	3.4%	13.1%	5.5%	11.5%	3.9%	2.9%	8.3%	-	2.2%	-	10.6%
Aug-2017	12.2%	4.0%	16.6%	3.6%	10.1%	14.1%	2.4%	15.1%	2.9%	3.1%	6.6%	-	5.9%	-	3.3%
Sep-2017	4.6%	2.0%	16.4%	3.6%	12.7%	9.4%	1.4%	18.0%	3.7%	1.8%	5.5%	0.7%	15.7%	0.9%	3.5%
Oct-2017	17.8%	7.9%	18.7%	-	6.0%	12.6%	0.5%	17.1%	5.0%	-	1.4%	4.4%	8.2%	-	0.2%
Nov-2017	19.9%	10.0%	19.2%	-	10.5%	9.9%	0.5%	13.5%	0.5%	4.2%	0.2%	3.1%	1.7%	0.2%	6.5%
Dec-2017	19.9%	10.0%	18.5%	-	11.3%	12.9%	0.0%	10.1%	2.0%	0.5%	0.2%	4.5%	0.2%	0.3%	9.6%
Jan-2018	20.0%	10.0%	18.9%	-	5.4%	12.9%	-	10.4%	0.0%	-	0.6%	3.6%	6.3%	4.5%	7.3%

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As of Jun-03-2024



	SPY	EWJ	EFA	IEF	TLT	LQD	HYG	EEM	IBB	IYR	PFF	XOP	GLD	TIP	CASH
Feb-2018	16.3%	7.7%	5.3%	-	0.4%	4.0%	1.0%	7.2%	1.4%	-	-	0.3%	15.7%	3.3%	37.3%
Mar-2018	12.0%	3.4%	-	-	-	-	0.6%	8.1%	1.9%	-	3.5%	0.1%	14.0%	6.4%	50.0%
Apr-2018	2.2%	6.6%	0.2%	0.5%	0.0%	-	3.0%	5.6%	-	-	2.8%	2.7%	18.7%	8.5%	49.3%
May-2018	1.2%	2.9%	1.9%	0.4%	1.8%	0.0%	4.1%	-	-	3.3%	7.0%	14.6%	6.7%	7.8%	48.5%
Jun-2018	3.2%	1.1%	-	0.4%	4.4%	0.0%	6.5%	-	0.2%	5.9%	8.0%	14.7%	2.3%	7.4%	45.7%
Jul-2018	7.7%	-	-	2.2%	7.7%	-	2.1%	-	1.7%	11.1%	6.4%	13.3%	-	6.4%	41.3%
Aug-2018	16.2%	-	-	2.8%	7.9%	2.7%	10.5%	-	4.2%	11.9%	5.1%	8.1%	-	5.7%	25.0%
Sep-2018	18.1%	0.6%	0.1%	1.2%	3.9%	5.2%	15.7%	-	4.8%	11.8%	1.4%	9.4%	-	3.1%	24.7%
Oct-2018	12.2%	1.9%	0.9%	1.4%	-	1.9%	15.6%	0.0%	2.7%	9.4%	0.4%	7.9%	2.4%	0.2%	43.2%
Nov-2018	4.3%	-	-	10.6%	-	-	10.0%	-	0.4%	15.4%	0.4%	2.0%	6.7%	0.9%	49.4%
Dec-2018	2.3%	-	-	18.4%	9.4%	1.1%	2.1%	-	-	12.7%	-	0.1%	6.8%	0.2%	47.0%
Jan-2019	0.1%	-	-	20.0%	14.5%	2.8%	2.5%	3.8%	1.4%	9.0%	-	-	13.2%	1.1%	31.7%
Feb-2019	1.4%	-	-	18.2%	17.5%	11.5%	2.4%	3.5%	2.3%	18.0%	0.6%	-	14.2%	0.3%	10.0%
Mar-2019	4.6%	-	4.3%	13.3%	6.0%	16.6%	10.4%	4.0%	1.0%	17.4%	2.8%	0.0%	10.4%	0.1%	9.0%
Apr-2019	9.3%	-	6.0%	12.4%	9.9%	17.4%	6.7%	4.2%	0.0%	19.7%	2.3%	0.1%	9.3%	0.2%	2.4%
May-2019	11.7%	-	4.1%	11.7%	16.2%	17.8%	2.4%	2.1%	-	17.7%	3.3%	0.3%	8.3%	3.0%	1.3%
Jun-2019	8.5%	-	1.3%	11.5%	19.4%	18.0%	0.8%	0.0%	-	17.6%	5.3%	-	10.6%	3.8%	3.1%
Jul-2019	15.7%	-	0.5%	12.6%	18.4%	17.3%	0.9%	0.2%	-	7.9%	8.3%	-	8.5%	4.0%	5.7%
Aug-2019	13.8%	-	-	10.7%	18.3%	19.9%	1.0%	0.0%	-	4.2%	9.9%	-	9.6%	7.9%	4.9%
Sep-2019	17.4%	1.7%	0.2%	5.0%	17.5%	17.2%	8.3%	-	0.1%	3.0%	8.4%	0.0%	12.4%	2.8%	6.1%
Oct-2019	9.2%	5.3%	0.3%	9.7%	14.0%	16.1%	5.1%	-	-	10.4%	8.5%	-	9.8%	0.2%	11.3%
Nov-2019	15.4%	9.0%	7.7%	8.5%	9.6%	16.4%	1.4%	5.2%	1.2%	5.9%	6.8%	-	9.8%	1.9%	1.2%
Dec-2019	20.0%	9.6%	7.1%	1.7%	7.1%	17.6%	4.1%	4.4%	6.5%	0.7%	2.6%	-	9.2%	2.5%	7.0%
Jan-2020	20.0%	6.7%	4.2%	0.4%	6.7%	15.0%	3.2%	9.2%	7.0%	3.9%	4.1%	1.2%	18.2%	0.0%	-
Feb-2020	19.7%	4.6%	2.6%	0.6%	14.0%	15.9%	0.8%	2.5%	8.2%	9.0%	2.1%	-	19.9%	0.1%	0.0%
Mar-2020	2.0%	0.0%	-	17.7%	10.5%	6.1%	3.8%	3.6%	4.5%	0.2%	0.6%	-	13.9%	4.8%	32.3%
Apr-2020	-	0.1%	-	20.0%	3.7%	-	6.0%	-	3.1%	-	0.1%	0.0%	8.8%	8.4%	49.6%
May-2020	-	0.0%	-	20.0%	8.5%	-	3.3%	-	6.0%	-	-	-	8.0%	8.5%	45.7%
Jun-2020	0.3%	2.1%	0.0%	18.2%	6.3%	2.8%	3.4%	-	6.0%	-	1.2%	0.4%	8.7%	8.1%	42.4%
Jul-2020	0.2%	1.1%	1.9%	15.7%	12.5%	7.6%	0.9%	1.7%	7.0%	0.0%	2.5%	0.4%	10.8%	9.0%	28.6%
Aug-2020	7.1%	1.8%	1.1%	13.6%	10.1%	8.6%	3.1%	2.6%	2.3%	0.4%	3.0%	-	11.3%	9.9%	25.1%
Sep-2020	7.2%	3.1%	0.4%	15.2%	6.6%	6.6%	3.0%	3.7%	0.4%	0.0%	5.1%	0.1%	10.6%	9.7%	28.4%
Oct-2020	4.3%	6.7%	-	12.9%	7.4%	6.8%	7.9%	7.2%	1.8%	0.0%	6.7%	-	6.8%	10.0%	21.7%
Nov-2020	0.5%	8.6%	-	6.8%	6.1%	9.3%	4.6%	11.4%	1.2%	-	5.0%	-	4.4%	10.0%	32.3%
Dec-2020	4.0%	7.1%	1.9%	4.7%	1.1%	17.3%	8.9%	10.0%	3.3%	-	7.9%	0.1%	1.3%	9.6%	22.7%
Jan-2021	2.9%	9.1%	5.5%	0.9%	2.5%	11.6%	15.1%	9.1%	3.2%	0.1%	8.5%	1.0%	0.6%	9.4%	20.5%
Feb-2021	0.3%	6.7%	2.3%	0.8%	0.2%	7.3%	18.1%	9.1%	4.2%	1.0%	2.5%	2.4%	-	9.8%	35.3%
Mar-2021	1.5%	4.7%	2.7%	0.0%	-	-	12.0%	4.5%	0.5%	4.4%	8.7%	4.5%	-	7.4%	48.9%
Apr-2021	9.5%	2.7%	4.4%	-	-	-	11.9%	0.1%	-	10.0%	7.5%	2.8%	-	4.4%	46.7%
May-2021	8.1%	0.1%	6.0%	-	-	-	5.0%	-	-	14.9%	5.7%	4.9%	1.6%	7.1%	46.7%
Jun-2021	5.1%	-	3.9%	-	2.1%	1.6%	9.5%	-	-	17.8%	4.5%	4.5%	3.9%	4.1%	42.9%
Jul-2021	11.5%	-	0.3%	1.0%	7.0%	6.6%	5.8%	-	1.0%	18.5%	3.3%	6.6%	-	7.2%	31.1%
Aug-2021	18.2%	-	2.5%	1.9%	10.8%	6.8%	0.3%	-	3.0%	18.1%	2.5%	1.5%	-	9.7%	24.8%
Sep-2021	19.7%	2.4%	1.1%	3.7%	12.8%	6.8%	3.7%	-	4.5%	15.5%	0.8%	1.0%	-	10.0%	18.0%
Oct-2021	7.6%	1.2%	-	1.4%	7.0%	1.1%	4.2%	-	0.5%	16.2%	0.8%	7.2%	-	10.0%	42.8%
Nov-2021	16.9%	0.0%	-	-	8.5%	-	0.1%	-	0.0%	12.9%	1.1%	7.5%	1.6%	9.8%	41.5%
Dec-2021	18.0%	-	-	1.8%	18.6%	-	-	-	0.0%	11.5%	0.1%	2.5%	2.1%	8.6%	36.8%
Jan-2022	13.6%	-	0.1%	1.7%	11.4%	-	1.7%	-	-	10.6%	0.1%	3.1%	6.6%	6.7%	44.4%

INDEX REPORTING

GS Momentum Builder® Multi-Asset 5S ER Index

As of Jun-03-2024



	SPY	EWJ	EFA	IEF	TLT	LQD	HYG	EEM	IBB	IYR	PFF	XOP	GLD	TIP	CASH
Feb-2022	2.4%	-	-	7.9%	6.4%	-	3.2%	0.6%	-	2.0%	-	9.1%	10.4%	7.8%	50.0%
Mar-2022	5.5%	0.2%	1.9%	2.0%	1.2%	-	6.3%	0.3%	-	0.1%	-	7.8%	15.9%	8.8%	50.0%
Apr-2022	5.5%	0.1%	0.6%	0.8%	-	-	2.5%	-	-	7.5%	-	5.9%	17.8%	9.4%	50.0%
May-2022	-	-	-	7.2%	-	-	11.0%	-	-	1.6%	-	5.3%	15.4%	9.5%	50.0%
Jun-2022	0.0%	-	0.2%	14.3%	-	0.8%	6.1%	1.2%	-	-	-	4.5%	12.9%	9.9%	50.0%
Jul-2022	0.4%	0.1%	-	18.4%	-	3.0%	1.2%	1.3%	0.3%	-	0.8%	2.4%	13.1%	9.1%	50.0%
Aug-2022	0.5%	-	-	18.1%	0.1%	1.9%	2.8%	0.0%	3.9%	0.8%	4.0%	4.5%	6.6%	7.6%	49.2%
Sep-2022	0.0%	-	-	19.4%	-	0.4%	4.4%	-	3.4%	0.3%	4.0%	3.9%	4.7%	9.5%	50.0%
Oct-2022	-	-	-	19.8%	-	0.1%	7.6%	0.1%	0.1%	-	6.7%	0.7%	5.1%	9.8%	50.0%
Nov-2022	-	-	-	20.0%	-	0.6%	9.1%	0.3%	0.2%	-	3.6%	1.2%	4.9%	10.0%	50.0%
Dec-2022	-	0.0%	2.5%	19.6%	-	0.1%	14.3%	0.1%	0.4%	-	1.2%	0.2%	3.2%	8.4%	50.0%
Jan-2023	-	0.1%	3.2%	14.4%	-	4.2%	8.3%	0.4%	0.8%	-	1.4%	0.3%	8.1%	8.8%	50.0%
Feb-2023	-	1.5%	7.1%	10.3%	1.3%	1.3%	5.9%	2.0%	1.2%	0.4%	5.7%	0.0%	7.2%	7.3%	48.8%
Mar-2023	1.4%	0.8%	11.2%	7.9%	0.4%	0.4%	5.8%	-	0.4%	-	2.8%	-	12.4%	6.7%	49.7%
Apr-2023	5.9%	2.6%	12.2%	1.8%	1.8%	3.2%	6.2%	-	0.2%	-	0.1%	0.2%	15.3%	5.6%	44.8%
May-2023	3.2%	4.9%	17.9%	6.4%	0.4%	2.1%	2.6%	-	0.2%	-	-	-	18.8%	4.7%	38.8%
Jun-2023	12.3%	8.3%	11.1%	3.5%	0.1%	3.0%	1.2%	0.1%	0.3%	0.5%	0.7%	0.1%	15.8%	0.4%	42.6%
Jul-2023	16.8%	7.6%	10.2%	-	0.4%	0.5%	1.3%	0.1%	-	5.4%	0.2%	0.1%	8.6%	0.1%	48.8%
Aug-2023	19.0%	5.7%	3.5%	-	-	-	3.3%	0.1%	-	1.2%	1.5%	7.4%	9.6%	0.0%	48.6%
Sep-2023	18.2%	5.6%	1.0%	-	-	-	6.3%	-	-	0.2%	1.0%	11.9%	8.1%	-	47.8%
Oct-2023	13.3%	3.2%	0.0%	0.1%	-	-	14.4%	-	0.2%	-	0.4%	11.5%	4.1%	2.7%	50.0%
Nov-2023	14.1%	4.0%	0.1%	-	-	-	12.5%	0.2%	-	-	0.1%	7.0%	12.5%	0.9%	48.7%
Dec-2023	17.9%	3.4%	0.7%	0.1%	-	4.8%	17.1%	-	-	0.2%	0.2%	3.9%	8.0%	-	43.7%
Jan-2024	19.0%	5.3%	0.6%	0.6%	0.3%	6.5%	16.2%	-	0.5%	2.0%	3.8%	0.8%	3.0%	0.1%	41.3%
Feb-2024	19.8%	8.2%	1.5%	0.7%	0.0%	4.0%	10.4%	-	2.8%	0.1%	9.4%	1.2%	0.1%	0.1%	41.7%
Mar-2024	19.7%	9.0%	2.5%	-	-	-	2.0%	-	0.9%	-	8.5%	4.2%	9.3%	0.3%	43.7%
Apr-2024	18.3%	6.9%	2.4%	-	-	0.1%	2.3%	1.3%	-	-	4.2%	8.0%	14.9%	0.1%	41.3%
May-2024	13.7%	1.4%	7.3%	-	-	0.2%	3.9%	3.8%	0.2%	-	0.8%	2.1%	18.3%	0.8%	47.5%

INDEX REPORTING

GS Momentum Builder® Multi-Asset 5S ER Index

As of Jun-03-2024



IMPORTANT INFORMATION

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Different strategies with a different set of underlying assets may significantly outperform the selected strategy. For parts of the back-testing period, the underlying assets showed in this presentation have had strong performances. Back-tested and past performance figures are not a reliable indicator or guarantee of future results.

The strategy is not actively managed. For further information and disclosure about the strategy, including in particular relevant risk factors, please refer to the related transaction documentation.

The index was launched on May 16, 2016. Hypothetical performance from August 28, 2008 to May 15, 2016 is based on the historical levels of the underlying assets using the same methodology that is used to calculate the index.

Hypothetical performance prior to the launch of the index on May 16, 2016 refers to simulated performance data created by applying the index's calculation methodology and strategy to historical levels of the underlying assets that comprise the index. Such simulated performance data has been produced by the retroactive application of a back-tested methodology, and may reflect a bias towards strategies that have performed well in the past. No future performance of the index can be predicted based on the simulated performance or the historical returns described herein.

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